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THE HOSPITAL AS A FACTOR OF INTEREST TO THE MEDICAL PROFESSION *

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The hospital as a factor in civilization began almost back in the dark ages when military commanders, chiefs of clans and monarchs were compelled to maintain some place in which to take care of their sick and hurt soldiers. The principle underlying the hospital in those days was a wholly selfish one and contemplated merely the fighting strength of the army.

At a later day some of the religious orders began to care for the homeless and helpless within their domains. One hundred years ago society as a whole began to consider its obligations to the poor and helpless who were sick, and the first civil hospitals were created. Little by little and step by step these hospitals grew in grace, physicians began to frequent them in their studies of medical science, and it is from this period that the hospital dates as a real factor for the common good. Many can remember when the hospitals in this country were places to which might be sent only those who could not be cared for elsewhere, and no one who had a comfortable home and the means of employing physicians and nurses ever voluntarily went to the hospital.

With the improvement of methods employed in the cure of disease, and the better equipment of the hospitals, came a new period, and in desperate cases surgical patients were ordered to hospitals since these furnished better facilities in which to do surgical operations. Then came the germ theory of disease and antiseptic surgery, and the patient's home was recognized as no longer furnishing the field for a surgical operation or the facilities to perform one. The hospitals in those days reeked with vile odors of carbolized oils and iodoform and iodin and other ill-smelling stuffs supposed to have the magic power of destroying germs of disease.

Then followed a better day than all, the days of aseptic surgery and aseptic medicine, in which cleanliness was regarded as the very acme of godliness. We had a period in which the hospitals were clean and sweet, in which the sweetness of flowers was permitted to pervade the atmosphere of the sick-room and the corridors. It was then that people began to frequent the hospitals voluntarily — they no longer felt that an order to go to a hospital was a sentence of death. This brings us to a period perhaps ten or fifteen years ago. Within that time the practice of medicine and surgery has made vast strides; pathology has come to mean much, and bacteriology even more. We have learned that certain pathologic conditions of the system are made manifest by certain conditions of the blood and the secretions; we have devised means of ascertaining these conditions and of measuring their significance, and by these various means we are now able to diagnose disease more certainly and more accurately than ever before. Moreover, we have learned to treat disease far differently and to use physical apparatus, electrical instruments and devices of various sorts that are now recognized as the equipment of the modern hospital.

A period has come in which all men, women and children who suffer with even the ordinary ills of life — all actually sick persons — must be taken to the hospital if they are to receive that care and those means of cure which the science of medicine is now able to provide; so that the whole problem of our civilization so far as the sick is concerned has shifted, and to-day it is not the homeless and the helpless alone who are permitted the benefits of the hospital, but all sick mankind.

A few years ago the adequately equipped hospital was a clean house with clean floors, clean walls, a clean bed, indifferently trained nurses and a doctor whose sole means of diagnosis were his ear, his eye and his touch at the bedside of the patient. To-day such a hospital is inconceivable, and the modern hospital must be equipped with a laboratory of pathology to aid the surgeon or physician in his diagnosis, a laboratory of bacteriology, in which the heterovaccines and autovaccines are made and employed, a department of physical therapeutics for various sorts of exercise of the various parts of the body, for hydrotherapeutic and electrotherapeutic treatment, a department of dietetics in which patients may be fed by the doctor's prescription and their food measured in terms of calories and chemical constituents; an operating department, aseptic, with all which that term implies; a milk laboratory for the formulation of food for infant-feeding, and a vast list of machinery such as blood-pressure apparatus, instruments for measuring the hemoglobin, microscopes and instruments for counting the blood-cells, *x*-ray outfits not alone for diagnosis of fractures of the bones but for diagnosis of lesions of the soft tissues and for treatment of certain parasitic diseases and for the treatment of certain neoplasms, including cancer forms, apparatus for introducing normal salines and other fluids into the blood-stream subcutaneously or intravenously, and so on down the list almost *ad infinitum*.

In this modern hospital the division of units must be made so clear and convincing that an infinite variety of diseases may be treated without fear of cross-infections. The communicable diseases of childhood must be cared for so that a child brought in suffering from one disease may not contract another before it leaves the institution. The idiopathic erysipelas of the medical ward must not be allowed to communicate the infection to the surgical

* Chairman's address before the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City June, 1912.

department. In the maternity department there must be such rigid technic and such inviolable rules of conduct that the puerperal woman may be cared for and cured without endangering the health of the other patients in the department. It is impossible always to prevent the occurrence of thrush or ophthalmia neonatorum, but it is no longer forgivable that one case shall be followed by another. We recognize the epidemic forms of cerebrospinal meningitis and poliomyelitis, but we do not forgive the establishment of these epidemics in the wards of the modern hospital.

From these fundamental principles of hospital administration has grown a profession in which the architect in all his branches must co-labor with the pathologist, the bacteriologist and the specialist in all the branches of medicine and surgery, a profession which we have come to call hospital administration.

Now let us retrace our steps a moment for a brief review of what has been accomplished in this direction. As far back as 1863, Florence Nightingale published a book on the hospital of that day. Her plans down to the minutest detail show the hospital unit almost precisely as it is to-day—the ward flanked by the service-room, the bath, the toilet, the slop-sink room, the convalescents' dining-room, the linen room, the surgical dressing-room, the supply-rooms and the medicine-closets. We have not gone far to improve on this old unit—it is the same to-day as it was then, but the details are vastly different. The hospitals of that day ignored cracked floors, carpeted wards, holes in the walls, pictures hanging on moldings, upholstered furniture, crevices everywhere as an abiding-place for microbes. The structures were of wood, literally tinder-boxes, with a power plant in the basement as an added danger of fire.

To-day our units are the same, but our construction is steel and concrete, the monoliths and polyliths; we have no carpets and dust-catchers; our furniture is of white enamel, not only to deny an abiding-place to micro-organisms but also in order that the supervisor may see where there is dirt. We have forsaken the old-time heat registers with their dust and soot; we have steam radiators that give nothing into the sick-room; we have screens on our windows to deny admission to the fly and the mosquito and other insects that may carry the organisms of disease. We know that sunlight is one of God's ways of curing disease and that fresh air is one of the greatest physicians in the world, so that we build our modern hospitals with windows facing to the sun, with air-space measured in terms of cubic feet for the sick.

We have serving-rooms for feeding the sick as they did in Florence Nightingale's day, but our method of feeding is vastly different; the pathologist has told us that the diabetic must be fed on certain kinds of food carrying certain chemical constituents, that the nephritic must be fed on very different foods, and that those suffering from certain other disease must have their diet measured in rigid terms, so that to-day we have advanced in this department to a stage at which the physician may measure his chemical skill by means of practical metabolism against the unrhythmical and unhealthy functions of the organs of the body, and so by using the laboratories as they are constituted he may build up a wasting frame, and at the same time withhold those chemical poisons that are responsible for the patient's downfall. We have reached a time when we may see through the microscope and by our various scientific means the very processes of functional activity, looking almost as it were through a glass on the inner workings of the various organs of the human body.

Some of these thoughts must present themselves to us as we meet here to-day to inaugurate the Section on Hospitals of the American Medical Association. We meet for the first time to recognize a new specialization in the science of medicine—that of the hospital administrator, that of the specialist whose duty it is to present to the modern physician the facilities which he needs for the care of his patient. In the creation of this section, the House of Delegates, our governing body, has given a new impetus to the principle long ago recognized by some of us—that the hospital administrator must be one who is versed in at least the principles of the science of medicine, in order that he may coordinate the activities of the hospital and its varied facilities with the scientific work of the physician in charge of the patient. Many years ago a few medical men were placed in charge of hospitals, but mostly they were men who had failed in the practice of their profession, or were broken down in health and no longer able to bear the hardships of practice; they were usually men unskilled in commercial activities. Our profession is one that notoriously unfits men to deal with other business in the marts of trade—with the buying and selling of supplies, the handling of help and the management of employees, in the critical review and approval or disapproval of architectural plans, the economies of the power plant and the various physical activities incident to the administration of a hospital. Is it any wonder then that these men failed in their task? And they did fail, and in their failure brought reproach not only to their profession, but to the hospital in which their activities were employed. But within the past few years there has grown up among us a new class of men, men reared in the colleges, graduated from the best medical schools, trained in the fundamental principles of their profession, in internship and staff positions in the hospitals and who then, prompted by some special fitness that has been demonstrated in their careers, have selected for themselves the medical specialty of hospital administration, just as other men had selected other specialties. There are not many of these roundly equipped and practically trained medical men to-day, but their number is growing and the demand for their services is great.

If this section of the American Medical Association is to achieve anything—and we are solemnly impressed with the fact that it is to achieve something—then its greatest field of usefulness will be found in that junction between the medical practitioner and his work in the hospital. We are not alone attempting here to help the hospital administrator grow great in his field of usefulness, but as practitioners of medicine we expect him to help us grow great, to learn many things in hospital procedure, the use of apparatus, methods of doing new things, and of doing old things in a new way. We expect him to help us train our interns in order that the younger men in the profession may be better in this community of interest.

So let us join hands, this little body of men who are here, and let us say to each other: Here is a nucleus for a great field, for a great work; we will help each other and bring in others to help us and themselves to the end that the hospitals of this broad land may be better built, better equipped and better administered, and in order that the medical man of to-day and to-morrow may do his work better because of these physical and moral improvements, all to the common end that humanity may profit by this, the small beginning that we meet here to celebrate to-day.

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THE HOSPITAL IN RELATION TO MEDICAL SCIENCE *

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The formation of a section to be devoted to the consideration of hospital problems is to be welcomed as meeting a real need of the profession. Hospitals have played an important part in the past and are destined to play a much greater one in the future in the advancement of medical science and art and in the promotion of medical education. In recent years they have assumed interesting and significant sociologic functions, and it is possible that it may hereafter be deemed wise to add the subject of medical sociology to the title and functions of this section. Certainly there should be some section in which this important subject may receive proper consideration, and it does not seem desirable to multiply the sections of the Association more than is absolutely necessary.

The various activities of the hospital may be classified as humanitarian, scientific and educational. Although included in the foregoing, it may be well to specify also the sociologic activities. The most widely useful hospitals are those which recognize and give their proper share to each of these functions.

The position held by the superintendents of many of our hospitals is, I believe, peculiar to American hospitals. This position is one of much larger influence and authority and of more varied functions, not only on the administrative but also on the professional side, than any corresponding one in European hospitals. As a rule the superintendent comes into much closer relations with the trustees or managers of the hospital than do members of the professional staff. His opportunities and power for good, as well as for harm, are very great. For the position of hospital superintendent, as it has developed in this country, at least in the larger general hospitals, it seems to me most desirable that a medical man of good administrative capacity should be chosen. The career has become a highly specialized and in many respects an attractive one. A medical superintendent should be the one most likely to appreciate and further the needs of medical science and education.

The care of the sick and injured is the primary and essential purpose of a hospital. The welfare of the patient should always receive the first consideration. The plea for scientific and educational uses of a hospital could not be justified if it could be shown that such uses interfered with the patient's welfare. As a matter of fact, however, one of the strongest supports for this plea is the demonstration, based on experience and sound argument, that the interests of patients are best served in hospitals which likewise recognize fully the needs of medical education and of scientific research. The best and most famous hospitals are of this character, and such hospitals serve the community more broadly and effectively than institutions which limit their activities merely to the care of patients.

The most urgent problems of medical education to-day relate to the teaching of the clinical subjects. It is the so-called theoretical or laboratory subjects which are now taught most practically, whereas the practical branches are taught most theoretically. In the past, hospitals and medical schools have developed in this country for the most part quite independently of each other, and as a result it has become a matter of great difficulty to bring them together in some such relation as that existing in Germany between university and hospital. The need of such affiliation is now widely recognized and efforts to solve this perplexing problem have in some instances met encouraging success. The solution does not in general lie in the direction of universities securing hospitals of their own, although they are fortunate if they possess them, but rather in the establishment of the proper relations between the universities and municipal or privately supported hospitals, whereby such hospitals can be made freely available for the training of students and physicians and the cultivation of scientific medicine.

We can scarcely point to-day to the existence in this country of great medical and surgical clinics comparable to those of most German universities, nor shall we have them before there has been considerable reorganization of the professional service in most of the teaching hospitals and until we recognize that the head of such a clinic cannot conduct it properly as a mere incident of a busy outside practice. It is a curious fact that, whereas every other branch of the medical sciences has now assumed the position of a science to be cultivated by those devoting their lives to the subject, clinical medicine, the main trunk from which all these branches have sprung and the most important of all the medical sciences, has not yet assumed this rank of an independent science requiring for its cultivation and teaching the single-hearted devotion of those who pursue it.

The heads of the departments of medicine and surgery in the university should of course be the heads of the corresponding clinics or services in the hospital, and in my judgment these positions should go to those who are willing to give most of their time to the care of patients within the hospital, to teaching and to the supervision or conduct of investigations relating to their science and art. They should be provided also with a resident staff superior to the ordinary interns and comparable to assistants in laboratories, who are appointed for longer periods and are in training for academic careers or the higher walks of medicine. Under such a system the hospital and the patients will be better served, medical education will be improved, and the art and science of medicine will be advanced far more than under the prevailing conditions. It is not enough that we should ask ourselves whether our medical schools and hospitals turn out as good doctors as those of Europe; we should also inquire whether they are contributing their share to the world's progress in the art and science of medicine. The problems of clinical medicine are of an interest and importance surpassing those of any other branch of medical science. For their solution the hospital ward should be the laboratory, but at present the organization of work in the ward bears so little resemblance to that of a scientific laboratory that a comparison between the two is only misleading.

A tendency at the present time to separate scientific research from the work of teaching has certain advantages, but has, I believe, even greater dangers. Scientific investigation in medicine during the last three decades has led to results of such vast importance as regards our power over disease that this makes an appeal to the public and to philanthropists much stronger than does medical education. Hence it is that large funds are available for institutes of research and for research hospitals which have no connection with education. Hospitals are often more eager to contribute to scientific medicine than to participate in the work of medical edu-

* Remarks made by invitation at the opening of the Section on Hospitals of the American Medical Association at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

cation, and in a number of instances have been provided with funds and laboratories intended solely for scientific research. While there is room for such independent endowments and institutions, the roots of fruitful scientific work lie in the educational system, and if the latter is neglected, the former will suffer. The traditional home and the most favorable environment for productive research is the university, and hospitals in affiliation with universities offer, I believe, the best opportunities for the promotion of medical science and art. Above all the teacher should also be an investigator.

The provision of laboratory equipment has become a necessity of the modern hospital. Modern methods of diagnosis require in ever-increasing measure trained experts and the necessary rooms and equipment for biologic, physical and chemical diagnostic procedures. Development along these lines has greatly improved the quality, both scientific and practical, of the work of our hospitals, and leads naturally to the desire to combine scientific investigation of the problems of disease with the practical aims of the hospital. This is a line of progress which should be encouraged by our hospitals, and which increases the service of the hospital to the profession and the public.

I think that a special plea is needed at present for the cultivation of pathologic anatomy, which has not, as some seem to suppose, exhausted its possibilities of usefulness in the advancement of scientific medicine. It is not necessary to decry the value of experimental and physiologic methods in order to give to pathologic anatomy its proper place in the study of the problems of disease. Every effort should be made to secure post-mortem examinations of those who die in hospitals, and in my experience such efforts, if properly made, are generally successful. Both hospitals and the public—I might add, even the profession—should be educated to a realization of the importance of such examinations, so that they are understood to be a matter of course in the conduct of the hospital.

Although but little appreciated as yet by the community, medicine is destined to play a leading part in the solution of many of the industrial, economic and social problems of the world, and in these newer activities, to which I referred at the beginning as sociologic, there is a place for the helpful cooperation of our hospitals; but I must leave this aspect of the subject to your consideration with this bare mention.

In conclusion, permit me to express my best wishes for the success of this new section, which opens with a program indicative of much useful work.

A CLINICAL VIEW OF THE SPECIAL DIET *

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The average hospital to-day is inadequately equipped to feed patients properly according to modern dietetic principles. The chief fault lies with the medical staff rather than with the administrative department of the hospital.

These are sweeping statements, but I believe they are justified. If true, the statements should not be interpreted as indicating neglect of patients, either on the part of the institution or on the part of the members of the staff, but merely as evidence of the fact that scientific dietetics is a subject of recent development with which the profession at large is not yet thoroughly familiar. But these principles are now known, and the time is not far distant when the hospital or the physician who feeds patients in the old way will justly be accused of neglect.

Up to a short time ago the feeding of patients was a matter of empiricism. By experience we found that certain articles of food disagreed with patients suffering from a given disease. Such articles were forbidden in that disease. Likewise we recommended certain articles of food because some patients had done well on them. Thus were developed a set of empirical rules, very general and indefinite in character; the diet was ordered according to the name of the disease, with little consideration for the needs of the individual patient; the rest was left largely to the judgment of the nurse or to the appetite of the patient. We did not bother ourselves with the composition of food, nor with its nutritive value. We may have tried to look up the word "protein" in the medical dictionary, and failed to find it. Perhaps we wondered if a calorie was not some article of food used by the French, instead of a convenient unit for measuring the nutritive value of foods.

Many physicians of middle age or older, even of such eminence that they are on hospital staffs, are asking these or similar questions to-day. Worse still, many of them are not sufficiently wide-awake to ask the questions at all. As the older men commonly direct the action of the staff, it is but natural that the staff has not, as a rule, been very active in advocating reform in this direction. There have been, of course, notable exceptions, but I am speaking of the average hospital of the country. It is interesting to observe that in some instances in which improved methods have been adopted the initiative has come from the trustees, chiefly laymen, who were forced into the consideration of possible economics by the increased cost of food-supplies.

While perhaps it is too early to attach definite blame to the medical staff for its indifference, the profession can take little credit to itself for what has been accomplished so far in this direction. As the feeding of patients is properly an important part of the treatment of all patients, and is essentially the whole treatment of a considerable number, it should be the duty of the medical staff to see that the hospital dietary is placed on a satisfactory basis. Because of this obligation it seems to me that the staff, rather than the management of the hospital, is responsible for the present unsatisfactory state of affairs.

Any discussion of a satisfactory diet at the present time must take account of its nutritive value, as expressed in calories, and of its content of the three nutritive constituents or foodstuffs—protein, fats and carbohydrates. For ease in calculation it is better to express the amounts of these foodstuffs in grams. Even the general or "house" diet—designed for the average patient during recovery from accident or operation or during convalescence from disease—should be estimated and planned in this way.

The limits of this paper will not allow a description of the methods by which these calculations are made, or a discussion of the reasons for the standard here suggested. For an average patient in bed the standard for a "house" diet may be placed at the following daily amounts: protein, 100 gm.; fats, 80 gm.; and carbohydrates, 300 gm., furnishing approximately 2,300 calories. By means of suitable tables on the composition

* Read in the Symposium on Relation of the Hospital to the Physician in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

of food, not only can a dietitian plan a suitable diet having this composition, but the diet can be expressed simply in terms of common measures of ordinary articles of food. Hence the amounts needed for a given number of patients can readily be calculated, and such a diet may be easily prepared in the general kitchen of the hospital. Variety in the diet from day to day may be secured by the substitution of different articles of food which have approximately the same nutritive value and composition.

It is customary in hospitals to provide at least one other menu, representing a lighter diet than the "house" diet. This is intended for moderately sick patients and those in the earlier stages of convalescence. It is a slight recognition of the principle that the diet should be adjusted to the individual needs of each patient. In a general hospital, however, it is not practicable to individualize in an ideal way with every patient. Nevertheless, proper treatment demands that such attention should be furnished for a limited number of selected cases, and the hospital must be prepared to do this. It would require but a slight extension of present methods to furnish not only the "house" diet and the "light" diet but diets containing 1,500, 2,000, 2,500 and 3,000 calories. This would allow the physician to prescribe diets more intelligently, and it would not only benefit the patient but would be more economical for the hospital. To furnish 2,500 calories of food to a patient who should take only 1,500 calories represents a considerable waste, whether the patient manages to eat it all or not. To establish such diets would be a long step in the direction of adjusting the diet to the needs of the patients. These diets could be based on standard amounts or "portions" of different articles of food and could be furnished largely from the general hospital kitchen.

Any further elaboration of diets, including the furnishing of special diets, absolutely demands the establishment of an adequate diet kitchen. By this is not meant the ward kitchen where the food is finally prepared for distribution to patients, but a well-equipped kitchen of suitable capacity where, under the immediate supervision of the dietitian, special articles of food may be prepared for a considerable number of patients. It is evident that such regulation of diets cannot satisfactorily be carried out by a steward or chef, by ordinary cooks, or by the regular nurses acting without supervision. The services of a competent dietitian are essential for success.

The exact relations of the dietitian to the other persons concerned with the purchase, preparation and serving of food will vary with local conditions, the organization of the hospital, and the administrative ability of the dietitian. But, either by actual control or by cordial cooperation, she should have supervision over the whole food problem, and should manage it. To put a dietitian in charge of a small diet kitchen, and to have her, with the aid of one or two nurses, prepare some special dishes, does not meet the problem satisfactorily. That merely makes of her a refined cook, whereas she should be the diet organizer and the diet manager for the hospital. Not only should she have authority in the general kitchen over the proper preparation of food, but her authority should extend to the wards so as to secure the accurate distribution of food to the patients and its proper serving.

I have dwelt on these details at some length because they are essential. The clinical results of special diets depend almost as much on an efficient machine to carry out orders as on the excellence of the diet orders themselves. The clinical results of special diets may be summed up by saying that in appropriate cases better results are obtained by special diets if properly applied, than by any other mode of treatment. Furthermore, in all cases a properly adjusted diet not only aids toward a more complete recovery but it brings that result about more quickly. This would justify the hospital in inaugurating proper dietary measures, even if this step involved considerable additional expense. But it is safe to say that the initial outlay would later be repaid by the more efficient and economical handling of this large item of expense, by the avoidance of waste, and by the shortening of the stay of patients in the hospital.

The keynote to successful dietetic treatment is the proper regulation of the diet quantitatively as well as qualitatively. We must keep in mind both the composition of the food and its nutritive value. A brief summary of a few diseases in which such methods are of value will show the importance of this work.

Infant feeding needs only to be mentioned. The value of such methods in the case of infants and young children is accepted by all.

In diabetes we have for years endeavored to eliminate from the diet all sugars and starches. We know now that many patients do better if we allow a certain definite amount of carbohydrates; but the amount must be carefully regulated and accurately controlled. We recognize now that it is as important to maintain the nutrition and strength by a sufficient allowance of food as it is to cut down the carbohydrates.

The regulation of the amount of protein taken in the diet is practically as important in nephritis, especially in the chronic cases, as is the regulation of the carbohydrates in diabetes. We are dealing with kidneys in which the power to eliminate the waste products of protein metabolism is impaired. The secret of success is to reduce the protein to the capacity of the kidneys and yet to maintain the nutrition and strength of the patient. It can be shown that the time-honored exclusive milk diet, so long advocated in the empirical dietetics for even the chronic cases, must either overtax the kidneys in such cases, or leave the patient seriously undernourished.

In a measure the importance of diet regulation is proportioned to the chronicity of the disease. In the acute cases, such as pneumonia, the exact regulation of the diet is of relatively little importance. The diet must be light and consist of food easily digested and assimilated, but owing to the short duration of the disease the nutritive value of the diet is of little importance. Partial starvation for a week is not serious, but when it lasts for three or more weeks, as in the case of typhoid, it becomes a serious matter.

The prevalent routine treatment of typhoid affords an inadequate amount of nourishment. The patient suffers from the disease plus partial starvation. He needs more protein and more calories than normally, but in the routine treatment he gets neither. The weakness and prostration are markedly increased. It has been clearly demonstrated that on a properly adjusted diet the typhoid patient remains better nourished, is stronger, and convalesces more rapidly. Statistics are as yet too meager to warrant us in saying definitely that the mortality is reduced, yet it is becoming more and more probable that this will be demonstrated in due time.

Tuberculosis is the type of the chronic wasting diseases. Diet shares first honors with climate and fresh air in the treatment. It was long ago recognized that abundant nutrition was essential. Then came the period of superalimentation—of stuffing the patient with milk and eggs. It is now becoming more generally recognized

that this is distinctly disadvantageous if carried too far. Careful studies have shown that patients do as well, and sometimes better, on less stuffing. Many do as well on diets which contain only a moderate amount of milk and few eggs. Thus the diet may be made much less costly but equally efficient.

It is only necessary to allude to the salt-free diet, the purin-free diet, the Lenhartz diet and the Schmidt diet to call to your mind the usefulness of special diets in the investigation or treatment of disease in appropriate cases.

In conclusion, the trend of progress is toward physiologic therapeutics. The importance of the regulation of the diet is being recognized more clearly every day. It is now possible to apply our scientific knowledge of dietetics in a practical way. The results justify the measures, and any hospital that pretends to keep abreast of progress must establish its dietary arrangements on an up-to-date basis soon if it has not already done so. Such measures will not only be of benefit to the patients but will prove economical to the hospital.

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ABSTRACT OF DISCUSSION

DR. FRED A. WASHBURN, Boston: It occurs to me that the scheme which we have just worked out in the Massachusetts Hospital, and which is described in a paper that I shall read to-morrow, will be very helpful in just the way that Dr. Arnold has described. The surgical service is divided into two parts, each of which has a chief. These two chiefs of service and the administrator form the surgical executive committee. The medical department is also divided and has two chiefs of service and they with the administrator form the medical executive committee. These two committees combined make the general executive committee. This brings the staff and the hospital administration together to discuss diet and other questions that may arise. Such a scheme as Dr. Arnold outlines is a most excellent one, but it requires a well-trained dietitian. It means not only one dietitian in a general hospital, but an assistant dietitian. We have a dietitian who has charge of the general kitchen and of the diet kitchen. She supervises all serving of diet in the wards, but she cannot do it all. She has student dietitians to assist her, women who have volunteered their services after finishing their studies; but it needs a permanent assistant or assistants to carry the scheme all out thoroughly.

DR. C. A. DREW, Worcester, Mass.: I wish Dr. Washburn would tell us about the ways and means of securing the right kind of dietitians. Where can we obtain qualified women to do this work and what must we pay for their services?

DR. F. A. WASHBURN, Boston: There are several institutions which educate women in this line of work. Pratt Institute, Brooklyn, N. Y., Drexel Institute, Philadelphia, Cornell University, and Simmons College in Boston. We pay our dietitian at McLean Hospital $1,200 a year, and the one at the General Hospital gets about $1,000, but she has been with us but a short time.

DR. J. W. COON, Wales, Wis.: I was pleased with the statement of Dr. Arnold that it is becoming less and less a custom, in the treatment of tuberculosis, to insist on the forced feeding of large quantities of milk and eggs, which was formerly so prevalent, but which has been found almost universally to produce marked disorders of digestion, especially when the forced feeding was combined with enforced rest. We have found it to be far more satisfactory to feed our patients a moderate quantity of a well-balanced ration, than a forced diet consisting largely of milk and eggs. I trust the time is not far distant when in our institution, the State Tuberculosis Sanatorium, we may have the feeding of our patients in charge of a trained dietitian.

DR. W. A. YOUNG, Toronto, Canada: What do you recommend in the way of diet in typhoid fever?

DR. THEODORE POTTER, Indianapolis: Anyone who has practiced medicine on the staff of a general hospital for a good many years can appreciate the importance and difficulties of diet in the hospital. The feature of expense is constantly before us. A special diet is usually more expensive than special forms of medical treatment, or special forms of drugging. It is one thing to say that this patient shall have this or that drug, and quite a different thing to say that this patient shall have some particularly prepared diet instead of so many quarts of milk each day in typhoid fever.

I think that the whole matter of special diet would need a great deal of simplification in order to make it possible in the ordinary hospital. The special forms of food will have to be classified and reduced to their simplest forms, for without a classification of that kind it would be difficult to carry out a diet scheme in the municipal hospitals, where the question of extra expense to the hospitals has to be considered, lest criticism should come on them.

DR. C. A. DREW, Worcester, Mass.: The hospital with which I am associated has as matron a competent woman who has been in that position with the hospital for years. The graduate dietitian is a woman 25 years of age, and while she is a graduate of a good school of domestic science, she is much younger and less experienced in every way than the matron who was in charge of the general kitchen. We would like to have a woman capable of taking charge of the whole diet question, but we cannot turn it over to a young woman, who is perhaps more concerned in dressing prettily and having a good time than she is in the science of her profession, and give her charge over an experienced woman who has been in the hospital service for a long time, and who is very competent practically, although not a graduate of any school of dietitics. As it is, the dietitian simply presides over the small diet kitchen in which we provide special diet for those who are very sick.

DR. F. M. BAUER, New York: I think I can say that the dietitian does not seek to supplant the competent matron or the competent person in charge of the dining-room, but that she is important in her own way (even if she be young) in unifying the problem of dietitics in many, many hospitals in one large city, or, if a student dietitian be kept in every hospital of a big department, one general dietitian can have supervision in all these hospitals.

DR. J. O. SKINNER, Washington, D. C.: I would like to ask Dr. Washburn and Dr. Arnold what has been their experience so far in this modern method of regulated diets in the hospital, and whether the staffs have assumed the responsibility of regulating these diets, or whether they have delegated to the administrative branch of the hospital, represented by the superintendent and, under him, by the chief dietitian, the responsibility in this matter? Of course, a diet, constituting as it does one of the most important factors in the treatment of cases, sometimes is looked after by the visiting staff, but I do not think it is usually done.

DR. JOHN ALLAN HORNSBY, Chicago: Our dietitian is a woman we have ourselves trained out of one of the domestic science schools, and we have succeeded so far that we now think we have a real dietitian. Her training was mostly accomplished by the members of the medical staff. They go to her and she goes to them; she is seen daily on the wards, more especially with the younger men who have time to do scientific work, and she makes rough abstracts of what they tell her and they talk to her just as they do among themselves. She is learning a good deal about the feeding of the sick. She has nothing to do with the general feeding of the hospital force. She has a diet kitchen of her own; she orders her own stuff from the steward, gets her supplies through the regular stores, and handles them from that time on. The orders go direct to her, on a form. Dr. Wiley said it was excellent when he saw it. In the first place, the diet sheet is the size of the regular record sheet of the hospital. [This consists of a record for each patient, giving, for each article of food, the way it is served, the quantity served, the quantity consumed, and the proteid, carbohydrate, fats, salts, fluids and calories contained therein.] There are spaces for breakfast, dinner and supper and a space at the bottom for miscellaneous remarks and computations.

This sheet gives the physician, in the course of a few days, if he is watching his patient, an opportunity to see what is accomplished. The patient runs along several days on a diet, and at the end perhaps he has lost some flesh, but also some sugar, albumin and so on. The physician may have to change the diet in order to bring up the patient's weight. I do not go into that, but the doctor does, and we keep him informed of what the patient is getting in chemical constituents of food and calories. In the diet kitchen we have seven undergraduates or pupil nurses. We have two women to do the heavy work and cleaning. These nurses have the work distributed among them, and each one takes a certain class of diets. The nurses are extremely interested in their work. They are asking questions from up-stairs all the time and the net results, I believe, are that we have the beginning of a real dietary. In the first place we began with two of the men doing this work, and then other men began to do it, and now we have out of a staff of forty men, I think I should say, a dozen who know diet and practice it intelligently, which they did not do two or three years ago.

DR. CHARLES RICHARD, Washington, D. C.: In the hospital of which I have charge, we have a dietitian in the kitchen, and while she is probably not educated in the chemistry of food, she has had practical experience, primarily as a trained nurse, and has an aptitude for that sort of work. Her diet slips are sent to her specifying the articles of diet appropriate for the patient. She selects and prepares the diets accordingly. She has been employed for only a few months. Prior to her assignment to that duty, physicians complained that they were not getting the kind of food they desired. The dietitian really selects the kind of food while the physician prescribes it. The difference in conditions now compared with what they were before her advent are very marked. The complaints have practically ceased. I think there is a great deal to be said about the preparation of food; that is, the preparation of food in such a manner as to make it palatable. It is very easy for the physician to prescribe a dietary, but it takes a dietitian to prepare the food properly. I do not think that that factor has been brought out at all, but we all know that it is a very important factor in the diet of the sick.

DR. H. D. ARNOLD, Boston: In reply to the question about the diet in typhoid fever, some years ago I investigated this matter at the Boston City Hospital, and found that the ordinary diet of a typhoid patient consisted of milk, broths and gruels, furnishing only about 1,200 calories in a day. This is an entirely inadequate amount of nutrition. With the same amount of milk, by the addition of more fats in the form of cream and butter, and the addition of more carbohydrates in the form of cereals and sugar of milk, it is possible to raise the nutritive value of the diet to 2,500, 3,000 or even 4,000 calories. A few eggs may also be added, and later soft solids may be used. Experience has shown that patients thus treated lose less flesh and make a much more rapid recovery.

One reason why the dietary measures I have advocated have not been more generally adopted is that up to a short time ago the subject of scientific dietetics was so complicated that it could not be satisfactorily applied in practice. In recent years, however, the knowledge and the methods have been so simplified that they can be readily applied both to private patients and in the hospital wards. The amount of detail in a hospital is so great, however, that the services of a competent dietitian are essential.

Something has been said of the difficulty of getting satisfactory dietitians. This is certainly true at the present time. There are, however, many women now engaged in this work who are giving very satisfactory service, and others are being trained. I think that in the near future there will be an adequate supply of well-trained dietitians.

Cancer Not Necessarily a Disease of Advanced Age.—Do not assume that, because your patient is young, the lump in any part of the body—tongue, breast or anywhere else—cannot, therefore, be a carcinoma. Remove it and see what it is made of.—C. B. Lockwood in *Clin. Jour.*

THE HOSPITAL VERSUS THE HOME IN THE CARE OF THE SICK; AN EVOLUTION *

P. E. TRUESDALE, M.D.
FALL RIVER, MASS.

That the home can no longer compete with the hospital in the care of the sick is evident from the increasing demand throughout the country for hospitals of every type. In 1900 there were approximately 5,000 public and private hospitals in the United States. In 1910 the number of these institutions had increased to about 7,000. Therefore, while the fear of entering the hospital for any serious purpose is still real, these figures show that the prejudice against hospitals is diminishing rapidly. It may be interesting to compare the status of the hospital and the home in the preantiseptic period and to-day.

In a monograph John Aiken, a London surgeon of the early part of the nineteenth century, expressed his thoughts on hospitals as follows:

"Every surgeon attending a large and crowded hospital knows the very great difficulty of curing a compound fracture in them. This is so universally acknowledged that the most humane and judicious of them have been obliged to comply with that dreadful rule of practice, immediate amputation in every compound fracture. In hospitals these sufferers seem to be given up to inevitable destruction. Preserve the limb, they die of the inflammation and gangrene; take it off, they are wafted by the suppuration and a putrid hectic. It is certain that the number sacrificed after surgical operations to hospital pestilence is an evil of important magnitude. This is out of all proportion so much greater in the crowded London hospitals than in private practice and country infirmaries." Again he writes: "It is certainly from bad success in hospital practice that Mr. Sharp and others have given a dreadful idea of so simple an operation as that for hydrocele. In private practice and in country infirmaries I have frequently seen it performed without a single dangerous symptom." Imagine the despair of the author in this concluding paragraph: "When one walks through the long wards of a crowded hospital and surveys the languid countenances of the patients, when he feels the peculiarly noisome effluvia so unfriendly to every vigorous principle of life and compares their transient effect on him with that to be expected by those who are constantly breathing them and imbibing them at every pore, he will be apt to look on a hospital as a dismal prison where the sick are shut up from the rest of mankind to perish by mutual contagion."

Sir James Simpson showed in his paper on "Hospitalism" the following statistics of mortality from amputation: St. Bartholomew's, 366 deaths per 1,000; Guy's, 382 deaths per 1,000; nine other London hospitals had a mortality of 411 per 1,000. On the other hand, in amputations in country practice the death-rate was only 108 per 1,000.

Dr. Lefort reported the mortality in a collected series of more than 800,000 lying-in cases. He showed a death-rate of thirty-five per 1,000 in lying-in hospitals, and 4.75 per 1,000 at home. In homes including the poorest and most wretched only five per 1,000 died. In all instances the mortality was higher whenever the number of patients was greater. During the early part of the last century the appalling mortality at the Hotel Dieu of Paris was due as much to the actual overcrowding as to the enormous aggregation of patients. There the extraordinary spectacle was to be seen of two or three

* Read in the Symposium on Relations of Hospital to the Patient in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

surgical patients, or sometimes even four parturient women, lying in one bed. A large proportion of beds were purposely made for four patients, and six were frequently crowded in.

Although these hospitals were intended as a blessing and a benefit to the poor, they were as gigantic evils, when compared with the home, for the care of patients. Is it surprising that the tradition of such conditions should have prejudicial influences for generations—that the fear of the hospital should become almost a family superstition?

Until the discoveries of Lister and Pasteur, hospital fever was not understood. A flood of light was then directed on the fundamental causes of the greatest of hospital dilemmas, and the application of germicidal principles, including sanitation, hygiene and antiseptics, eradicated the scourge of hospital contagion. Thereupon began the development of the modern hospital which, during the last half century, has gained such favorable and universal recognition as an institution of great economic value in every community. It now serves to safeguard the household not only from loss of life and spread of disease, but from the financial stress involved in the proper care of the sick.

Nothing better illustrates the great economic importance of the hospital than the occurrence of typhoid in the home. Without the hospital it may be estimated that an attack of typhoid of ordinary severity would cost the working man not less than $200. Added to this are the difficulties encountered in efficient nursing and the exercise of necessary precautions to limit the disease to a single member of the family, especially if the home is crowded or insanitary. Likewise with many other diseases such as the acute exanthems, tuberculosis, smallpox, meningitis, erysipelas and pneumonia; most of these are communicable, all are preventable, and the early removal of the infected person from the home to the hospital is essential to protect the community.

The black death, which visited London in the fourteenth century, is now merely of historic interest; yet it reminds us of a period when there were no hospitals, no buildings in which the plague-stricken could be separated from the healthy, no scientific physicians, no trained nurses; in short, no effective means whatever for combating a scourge which terrified a people for six years, and according to the chronicler Heckler, paralyzed morals, religion and education, and resulted in a collapse of civilization which continued to be felt for generations.

A review of such epidemics of black death and cholera emphasizes, if nothing more, the great insurance value of hospitals. New conditions and new habits are capable of producing new diseases, and the great influx of a foreign element, especially in our large manufacturing centers, should stimulate every effort toward adequate equipment in hospital protection.

The environment of the home is rarely conducive to the mental quietude of the sick. There is an intimate association between the home and a man's business affairs, and for a woman the home is her place of business.

Surrounded by affectionate, sympathetic and indulgent members of his family, the sufferer often finds rest only when thoroughly fatigued or drugged. The old idea that a patient should make a brave fight from the start against his affliction is too often encouraged in the home by the physician and the family. The layman's attitude of a mental resistance to his disease is to him a most potent factor in favor of recovery. Is the reverse not usually true? Transfer a patient to the hospital, or place him under the care of a trained nurse, almost to the exclusion of his family, and what happens? Nearly always an improvement. He passes from a state of mental activity to one of repose.

The losses involved on the side of the individual against the disease from worry, anxiety, fear and personal responsibilities at home are replaced by a more peaceful and effective utility of the normal functions of resistance.

The hospital of the present is, in a broad sense, a clearing-house for the sick. Through its facilities in every department for the careful study of all diseases it presents the minimum liability to oversight in diagnosis. Men of high rank in the various specialties serve its applicants, and it should not cause the general practitioner too much surprise or indignation if his patient of means dons his poorest garb and mingles with the poor to share these benefits. In other words, the patient of moderate circumstances, or better, often finds that he cannot obtain at home what his neighbor, because he is poor, obtains at the hospital without cost. For this reason the Massachusetts General Hospital has attracted patients from all over the New England states, in 1911 admitting 75 per cent. of its applicants from districts outside of Boston; and it will continue to do so until the standards of this hospital are approached in the smaller cities. If such hospitals excel and cure the sick, their capacity will be taxed and their charity abused; yet the responsibility for this abuse, as a rule, may be safely assigned to the sources from which the criticism comes.

Patients who have good homes prefer to get well in them and often receive a recommendation to the hospital with mixed feelings, unless the necessity and advantages are made clearly obvious. Not long ago I was called in consultation to see a man of 50 years who was suffering with acute abdominal symptoms. He had a good home, had never experienced a severe illness, and about the only thought he entertained as to hospitals was that more people die than recover in them. It required a good deal of persuasion to obtain his consent to be taken to the hospital, yet an acute perforated ulcer of the duodenum was found, and I am quite sure that in any other than the most favorable environment the lesion might have escaped unrecognized.

Laboratory methods of investigation are now found to be indispensable for purposes of refinement in diagnosis and the consequent application of intelligent treatment. The progress in chemistry, bacteriology and pathology in a single generation has made a wonderful expansion of the means of probing the mysteries of disease. The microscope, Roentgen rays, cystoscope, proctoscope and other instruments of precision are essential for collective data suitable for scientific methods of reasoning. All these are part of the equipment of a modern hospital and are readily accessible to the patient. Here it is customary to make investigations more thoroughly than would appear always to be necessary because the means are at hand, and it is not unusual to find that by such methods only can favorable results be achieved.

The contrary is the rule for the patient in the home. No more investigation is resorted to than is absolutely necessary, owing not alone to the time, labor and expense involved, but to the patient's not infrequent and erroneous impression that the best physician is the one who offers a diagnosis promptly and with the least commotion. It is treatment that is uppermost in the mind of the patient. Therein lies an essential difference between the hospital and the home. In the former, hours and often days are spent in determining a diagnosis, and the

treatment is brief. In the latter the reverse is the more common method of practice.

Rooms for special treatment and the operating-room bear an important interrelation in the management of many cases. Preparation is the sine qua non of recovery and success after many forms of surgical intervention. This is amply demonstrated by modern methods. Operations on the genito-urinary tract, especially the prostate and bladder, are done only after local and general treatment prepare the patient for a minimum liability to infection. Thyroidectomies, stomach resections, gynecologic and other operations now find their immediate and end-results better after the adoption of preliminary treatment.

The home will answer as a place for the preparation of simple cases and those which require only internal medication. Others in which preparation requires careful records, special instruments and skilled assistance should be in the hospital in proximity to these special departments. Portable apparatus can be applied in the home, but the efforts are too often disappointing. The use of the cystoscope, for example, is reliable only when employed in a room specially fitted for this purpose. Not only the equipment but the assistants should be permanent. Strange environment, odd equipment and raw assistants increase the labor and wreck results. This rule may be applied to the workers in the laboratory, in rooms for special treatment, and in the operating-room alike.

The operating-room and these special laboratories have enjoyed a combined function of recognizing many malignant diseases in their early and curable stages, whereupon the superstitious fear of the knife has by the achievement of surgery itself been displaced, and the increasing number of surgical patients in all hospitals measures the relative importance of the hospital and the home in the minds of the sick.

In addition to government, religious and community hospitals, there is a growing demand for private hospitals. Nearly all general hospitals have found it necessary to add private pavilions to their plants. This is another fair index of the change in the attitude of the public in favor of hospitals. The individual of means now finds his home entirely inadequate to meet the demands of modern medical science, and for the needs of his own family his home does not compare with the hospitals which he helps to maintain for the poor.

In many hospitals the private ward system has worked out satisfactorily, but there is a reason well founded on the part of private patients that the service in hospitals mainly devoted to the care of the sick poor does not meet the requirements of all classes. The details of refinement in furniture, dishes, linen and other supplies are not usually considered with a view to impressing a patient favorably. At a recent meeting of the American Hospital Association in New York City I heard an executive of one of our largest and best hospitals state that in refurnishing his private wards he felt obliged to instal more expensive furniture because another hospital had it. Why not? Would not many of his patients have it in their homes? Would they not select a hotel that had the best in furniture and linen? The same considerations would affect their choice of a hospital. It remains a truth that the per capita cost is of greater moment to many superintendents than an answer to an appeal from the patient for an attractive and cheerful environment.

While private wards in general hospitals often reduce the operating expenses, they add much to the burden of executives, and in some large hospitals such as the Massachusetts General and the Boston City hospitals no increase has been made in the number of private wards for many years. Smaller religious and private hospitals have been introduced to meet the demand. The former usually fulfil the average hospital requirements; the latter are made to pay dividends. While there are some model private hospitals, investigations show that the vast majority are modified apartment houses possessing the usual disadvantages of the home with few of the advantages of a modern hospital. They are operated for a hotel profit, and while my experience in conducting a private hospital covers a period of only six years, I have never succeeded in having an annual deficit below $3,000 on the hotel side.

I believe that a physician who conducts a private hospital should not be too much of a business man; like the physician in general practice, he should be prepared to make whatever sacrifices are necessary for the welfare of his patients, and his records, his system of accounting, his building, its equipment and its entire modus operandi should be open to inspection. An open door in this respect will render a service to the hospital if it deserves it, as well as to its patients. We should welcome a policy such as the licensing of all hospitals, for then, and then only, will public and private hospitals reach a standard which will make them in truth safer than the home for the care of the sick.

So great has been the demand in recent years for hospital accommodations that many hospitals have risen and flourished which in some respects have not compared favorably with the home as a place of safety. Choice of location, type of building and extent of equipment should be considered with the utmost care. Gift lots, in built-up and noisy sections of a city should have a ban placed on them for the location of hospitals. The design of building, the interior appointments and equipment should be supervised by physicians who by education and experience are familiar with problems of the sick.

For years an open countryside for the hospital has been advocated by physicians. St. Mary's Hospital at Rochester, Minn., is one of the first examples of the modern surgical hospital built in the open country. Its founder, Dr. William W. Mayo, by virtue of his indomitable courage, his ability as a surgeon of his period, and his keen prophetic sense molded an institution and an organization the buds of which have blossomed throughout the land. While not the only one, he stands out as a conspicuous figure among the early surgeons who by their great achievements have made it possible for us to-day to build hospitals in the country with most excellent results.

The last decade has marked a stage of transition in hospital conditions, and my own experience may be cited as an example of what has occurred in most cities. At Fall River, Mass., a city of 120,000 people, there was in 1905 no hospital which provided safe and sanitary accommodations for private patients. My hospital opened in that year with ten private rooms. After five years the increased demand justified me in erecting a modern hospital with thirty rooms for patients. This endeavor has not been a success financially, yet the results from a clinical standpoint have been sufficiently gratifying to offset the money loss. The continued drill of assistants in the same capacity for months or years has served two all-important purposes: It has created an *esprit de corps*, and it has operated to minimize the mortality and morbidity following major surgical procedures, thus creating in the public mind an attiude of respect and confidence free from apprehension.

While a discussion of this subject, "The Hospital versus the Home in the Care of the Sick," will from nearly every point of view favor the hospital, it must be acknowledged that a good home is safer than a hospital which is not modern in construction and equipment. The support of my contention in favor of the hospital should imply a hospital equipped with all that pertains to the general welfare of a patient.

Those of you who are administrators realize that our hospitals, both public and private, even those of recent construction, are not ideal. There is much to be learned in architecture, and many problems to be solved in management. New light and progress in hospital affairs will inevitably follow the proceedings of this Section. As a component part of this great American Medical Association it presents magnificent opportunities; and its endeavors will succeed in great measure, for its field of usefulness is large, its transactions based on experience and wisdom, and its support united, fearless and effective.

ABSTRACT OF DISCUSSION

DR. JOHN H. GIFFORD, Fall River, Mass.: He would not need to be a prophet who should declare that the limit of hospital efficiency has not yet been reached. That community is fortunate indeed which has seen lifted up new ideals of hospital efficiency and, what is better, new standards to which others must in time be expected to attain. If I could put together in a few words those elements which the artist calls "atmosphere," I should picture an atmosphere of optimism, of confidence, of assurance, of cheerfulness, of freedom from fear. One of the first of the conditions of a feeling of hopefulness is early submission to treatment, appreciating that ill results are oftenest and almost always due to delay.

Location and surroundings and furnishings have been referred to as of great weight. Fine architectural features, beautiful and ample grounds, magnificent outlook—if there be anything beautiful, if there be anything lovely and of good repute and peace-producing, let it by all means be made a part of the structure and environment of the up-to-date hospital. Let no high walls arise to raise a doubt as to whether the enclosure may be an almshouse, an asylum or a prison. Stone walls do not a prison make; nor do fire-proof walls and aseptic operating-room a hospital. These are a part only of the very raw materials. The living soul who above all others shall make of these stones a hospital home, the presiding genius who shall de-institutionalize this institution and become its indwelling spirit and the embodiment of its ideals and purposes—such a one having been sought far and wide and having once been found, let her not lightly depart.

The coming guest is welcomed and the going is speeded on his way. He is never numbered or lettered. He retains a name and a personality. He never becomes a mere case. Even that *bête noire* of many a hospital patient, the anesthetization, comes normally, smoothly, simply along, a perfectly peaceable performance.

Finally, this model hospital which exists chiefly to give supreme satisfaction and not primarily for pecuniary reward has at least one competent individual who shall be responsible for the study of the mental state of each patient, with a definite purpose of abolishing fear and worry, of strengthening confidence and of maintaining mental and nervous tone. This is one of the greatest shock-absorbers ever discovered. This should be the duty not of one but of everyone. These few points not only add a great deal to the patient's happiness, but also add something to the speed of his recovery.

DR. F. A. WASHBURN, Boston: We have a Social Service Department in Boston, which was organized by Dr. Cabot. In this same line of work in the hospital, we have had for many years a committee of visiting ladies—women of influence and importance in the community—who voluntarily give a certain amount of their time each month to the patients in the hospital. They give us the benefit of the outside view, the benefit of coming in contact with people of refinement; they lift the standard of the nurses going about the wards as they do, and to everybody they humanize things. We have a woman who is a graduate nurse, full of human sympathy, who is the agent of the visiting ladies, and she also keeps in touch with the office. It is her business to go about among the patients, to make out visiting lists, and to discover such patients as do not have visitors of their own. She keeps a card catalogue, and when one of my assistants wishes to arrange to transfer a patient to another institution she knows just which is the best place for that particular patient. She does little errands for the patients, or sees that they are done by some of the visiting ladies. She reads to the patients herself, or has some of the visiting ladies read to them, and does a thousand and one other things which make a difference in the lives of the patient.

A common cause of complaint formerly was the discharging of patients without thought as to the ways and means to their getting home. Now, no patient leaves the hospital unless he can get home without detriment; that is, we see that he is properly accompanied and that he has a ticket. Care in these little things makes all the difference in the world as to the reputation of your hospital in the community. It cannot be limited to the mere treatment of the sick. Dr. Truesdale mentioned the multiplication of small hospitals. I am afraid I do not think that this multiplication of small hospitals is usually a great advantage to a community. I think we are having hospitals built that should not be built.

I do not know the best solution of the problem. Perhaps, in a community near a large hospital, first-aid stations acting as feeders might be established. There is no doubt that in many small hospitals much poor surgery is done and the community is deceived as to the character of the work.

DR. GEORGE T. WEBER, Olney, Ill.: I come from an agricultural community which is not thickly settled. Our nearest large city is St. Louis, which is 150 miles away. When acute surgical conditions arise, which require prompt action in order to save lives, we need the small hospitals. I live in a town of less than 6,000 people, and fourteen years ago I established a small hospital with fifteen beds. I had many difficulties to contend with in establishing this hospital, and getting it on a solid footing. It was not a financial success—that is, the hotel part of it—and the hospital is not a paying investment, but we do good in our work. Robert Ingersoll once said that if he were making the world over, he would make health contagious. That is what we are doing in our small hospitals all over the country. Physicians are teaching people preventive medicine and these small hospitals, if properly conducted and managed, make health contagious in the community in which they are situated. Our hospital has grown from fifteen to sixty beds. There are exceptional cases which we send to St. Louis and Chicago, and even to the Mayos at Rochester, Minn., but there are few cases which we cannot take care of in this small hospital with perfect success and satisfaction, and our results compare well with the large hospitals.

A hospital in a small community has a tendency to educate the physicians in that community. The physician who has charge of the hospital must keep abreast with the times; he must learn from the masters of the surgical and medical profession, and perfect himself in his work, and the result is that his colleagues do the same thing as a matter of self-preservation, and they work in harmony and unity; the result is that the physicians become more thoroughly equipped and better prepared to take care of the sick and afflicted, and in that way much good is accomplished. Besides, the influence the hospital has on the community itself is far reaching in the way of usefulness. People learn to keep well. The person treated in these hospitals has been taught lessons in hygiene and he teaches his family the lessons he has learned and in that way much good is accomplished. In communities not in close proximity to large hospitals, the small hospitals are an absolute necessity and are a success if properly conducted and managed.

DR. F. A. WASHBURN, Boston: I did not mean to say that there should not be any small hospitals. What I meant to

say was that there are often too many small hospitals in the neighborhood of large hospitals; that these often take patients who could be better treated in the large hospitals.

DR. P. E. TRUESDALE, Fall River, Mass.: In reply to Dr. Washburn's statement that there are many small hospitals in the smaller cities that are of little value, further information of a definite character will be necessary from all hospitals before this supposition can be given serious consideration. Certainly no community can be at a disadvantage for having a good hospital within its borders. Until a system of standardizing and licensing hospitals is established, the true worth of a small percentage of the small hospitals may reasonably be questioned. Dr. Washburn has emphasized the importance of the social service department, and the excellent work it has done at the Massachusetts General Hospital. It is obviously impossible for the workers in this department to travel long distances and except by establishing cooperative societies with other communities the field of activity must remain within a short radius of the hospital. In Fall River there is a social service department allied with the Union Hospital and its work is recognized as one of the elements in an organization that has met a community need.

RELATION OF THE PHYSICIAN TO THE HOSPITAL *

JOHN B. MURPHY, A.M., M.D., LL.D.
CHICAGO

The most successful hospitals to-day are those that are in sympathy with their staff. The staff and the management must go hand in hand on account of their close relationships, which are complex, and will remain so until a certain standardization of all the hospital work can be effected. Not until then can the hospital and the profession succeed as one harmonious whole.

There are three different kinds of hospitals: those owned by private individuals, those run by corporations and the municipal hospitals. To secure the best result for the patient what is essential? I wish to mention first the one relationship that is of greatest vital importance to the hospital and the keystone to success between the hospital and its physicians, viz., that of rendering to each individual patient the highest type of scientific service from all the hospital departments. As far as the contact of the physician is concerned the question comes up in my mind as to how the patient is to be given the closest attention possible by the attending physician, and what element of this is the most important.

It is most important to find out about the patient before one makes a move, and the most significant element in this is to obtain a history, which is the hardest thing to obtain of a case. There is no man who has been connected with a hospital for many years who does not know that he cannot induce his interns and staff to write histories without continual urging. The clinical history in many cases is more important in arriving at a diagnosis than the physical examination or laboratory findings, and yet who writes the history? The newest intern and least-experienced man on the residence staff. We give the most incompetent man the most important thing to do. We give him the dressing in septic cases and the writing of histories. There is a greater percentage of failures in diagnosis from badly written histories than from anything else; therefore the histories should be written by the senior member of the house staff.

The house staff has heretofore been composed of men who stay a year or a year and a half or at most two years. We must make these men, who are going to be leaders of the profession, stay in the hospital longer; we cannot make leaders in the profession from men who have only a year or a year and a half resident hospital experience. We must follow the German custom; that is, the man who is to become junior or senior assistant in the departments of medicine or surgery should remain four or five years, as this length of training is necessary to round out his apprenticeship and prepare him for his subsequent teaching and surgical responsibilities. The senior assistant is the resident representative of the attending staff. I am sure that every man who has had a hospital service will tell you that he learned more from his senior intern, if he were a competent one, than from any other man on the staff. Training in the hospital stimulates the scientific spirit and the desire to learn; without this spirit and the desire to learn there can be no resident teaching; therefore we cannot afford to be changing our interns every year.

The system of hospitals will be changed radically in the near future. The general asepsis and cleanliness of the entire hospital must be looked after as well as that in the operating department. The next important advance will be in the administration of the serotherapy and vaccine treatments. Pathology must be pushed to the top notch; the pathologist is going to play the great rôle in the new therapeutic work. We must endeavor to have in every hospital the best trained men from that point of view that we can possibly secure because of the danger of anaphylaxis in serum treatments.

In the early part of the year, I endeavored to collect some data concerning hospital pathology, asepsis and cleanliness, but I received few replies to the letters that were sent and was therefore unable to formulate a report of value. The reason for the failure of the hospitals to give the information which I desired is worthy of the attention of this section.

The relationship of the Section on Hospitals to the hospitals, and the rôle it is to play, is a colossal one; I think that it is going to be second in importance only to the relationship of the Council on Medical Education to medical practice. Therefore the Section on Hospitals is going to be one of the most important sections of the American Medical Association.

The members of this section should be divided into committees to investigate the hospitals in the various states, so as to have at the next annual meeting a report on every hospital in the United States. We should have first a committee composed of three or five members to formulate a campaign to obtain the information desired.

The work should be definitely mapped out and the outline of questions sent to each county medical society and to any man who you know will give a careful, conscientious analysis of the situation. That information will be given by the hospital management reluctantly. Hospitals refusing to give the information for the good of the profession should be classed as discredited or as questionable institutions. It will be found difficult to secure an idea from the hospital management of the septic cases and deaths in the hospital, because the hospital management realizes that a death from sepsis is a failure and a discredit to that hospital. We must make it plain that this is a fact, and just as soon as we make it appear in that light, the hospital will assume the high position to which it is entitled. It is an obliga-

* Read in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

tion — a sacred obligation on our part — to see that all of the work within the hospital is conducted to the very best advantage of the patients admitted.

We want men working in every branch of the medical profession who are proficient. If they will prepare themselves as scientists they will not make so many mistakes in their early work. With this spirit within ourselves we will not have to ask people to legislate for us. Let us overcome our own shortcomings and we have all the legislation we want or need.

3305 South Michigan Avenue.

ABSTRACT OF DISCUSSION

DR. W. B. DORSETT, St. Louis: The question is how are we going to remedy this matter of incompetent work in hospitals. I remember, in a certain hospital, after I was made a member of the staff, as I went into the room adjoining the operating-room to get an instrument, a sister came running toward me and said, "Come into the operating-room, quick." I went into the operating-room and looked over the operator's shoulder. He had opened the abdomen to find a cyst. The blood was flowing freely and he was staunching it out with a towel; strychnin was being injected into the woman's arm. I said to him, "What have you here?" He said, "A fibroid tumor." I said, "My dear man, this is the uterus. Why don't you stop that hemorrhage? You are not going to get a fibroid tumor." He had cut the uterine artery and did not know the difference. He had attempted to get a cyst. I grabbed the forceps, stopped the hemorrhage and finally got the towel out; fortunately that woman recovered.

Now, here is where the harm results: The patient went through a long siege of convalescence and finally recovered; the operator was supposed to be a great man because he had saved the patient's life when she was so ill. The result was that four patients were taken to that hospital for operation by him and four women lost their lives. What stand are we to take?

The duty of this Section on Hospitals, it seems to me, is to go into this matter of hospital management as well as other subjects, the staff, etc., but especially the management of hospitals so that hospitals may be in such a position that the staff may formulate rules and will have to take a stand against malpractice cases and other things which occur in hospitals.

DR. R. R. HUGGINS, Pittsburgh: It seems a strange thing that members of hospital staffs, who are most familiar with the ability of men who attempt surgical or special work without the proper qualifications, are not strong enough in themselves to oppose these men, and keep them out of the hospitals. We do not seem to appreciate that in not opposing them we become parties to malpractice. A well-organized staff, composed of men not afraid to express their opinions, will do away with this complication in hospital work.

DR. A. G. BARRETT, Baltimore: I could relate quite a number of instances in which incompetent men were allowed to operate in hospitals. One very important one occurred in our city. A practitioner of medicine, a man without surgical training, was allowed all privileges in a hospital. He attempted all sorts of operating; necessarily the results were bad. Another question of importance is the man with ability who will operate at any time without proper diagnosis, regardless of anything but the fee.

I endorse the suggestion of advanced qualification for physicians who wish to operate and better control by hospital boards.

DR. L. H. TAYLOR, Wilkes-Barre, Pa.: Very often the members of the staff cannot choose their associates. I belong to a hospital in which, fortunately, we have the opportunity very largely of choosing our associates. In our state, a great many hospitals receive state appropriations, although they are not entirely state hospitals. At the last meeting of our state legislature, a bill was passed allowing any patient in a hospital receiving state aid to choose his own physician. That bill passed both branches of the legislature and, except for influence that was brought to the governor to induce him to veto that bill, it would have become a law; if it had passed, the management of the hospital could not prevent any physician from using the operating-room or wards for his patients, whether he were qualified or not. I firmly believe that an effort will be made to pass another law of this kind at the next legislature.

DR. H. M. HURD, Baltimore: Some months ago, I learned that on the medical staff of a hospital in one of our neighboring cities 250 physicians had the right to bring patients to the hospital and to operate. I do not call that a proper organization of a hospital. I believe that medical men throughout the country are justified in saying that they will not be connected with a hospital in which there can be no standard of medical and surgical work. There are hospitals controlled by religious organizations in which medical men have no voice whatever as to who shall be connected with the surgical staff. As medical men we have a right to say that no hospital is a proper hospital unless medical ideas govern in its management. As members of the staff we have a right to unite in saying that we must be consulted when appointments are made; and if persons are appointed on the staff with whom we do not care to associate, let us resign. The difficulty is that many persons are so anxious to be connected with hospitals that they are willing to accept positions even under embarrassing circumstances. Let us set a standard and say we will not be connected with a hospital unless we have a standardization of medical and surgical work from start to finish.

DR. GARRY D. HOUGH, New Bedford, Mass.: Some years ago, Dr. Dudley Allen, then president of the American Surgical Association, in his presidential address, suggested that the American Surgical Association establish what might be called a licentiate board, that this board examine any physician who should make application and, if found qualified to practice surgery, give him a certificate to that effect. Is not that a possible solution of the problem now up for discussion? If hospital trustees will say that they will not permit a surgeon to practice in their hospital until he gets such a license, it seems to me that a large part of the difficulty can be done away with. Most hospitals in smaller communities do not feel that they can take a stand of this kind for they say such a man must be allowed to practice in our hospital because every man has some friends and the hospital management does not think it wise to get any people of the community down on them. But, if such a licentiateship were established by the American Surgical Association they can say: no license, no practice.

DR. P. E. TRUESDALE, Fall River, Mass.: This problem must be approached fearlessly and yet tactfully. There are very few hospitals in the position of the Michael Reese Hospital, for instance. There the chief executive has complete control. He can promptly discover the tyro and eliminate him. The religious hospitals are in charge of the sisters, and many of them are open to the profession at large. Those in charge must be convinced that a surgical death from the hands of an amateur, who has no moral right to operate, is a crime for which the burden of responsibility rests on the hospital management. To be effective this matter should be treated by a diplomatic relationship of committees from this society with all hospital executives.

DR. HARVEY SMITH, Harrisburg, Pa.: What we want is personal education, that is, each individual man has to qualify himself for his work. I do not think this can be settled by hospital management, but must be settled with ourselves and each man must qualify himself to do his work efficiently.

DR. EDWARD JACKSON, Denver: At the last session of the Colorado legislature there was introduced, at the request of an influential constituent—not at the suggestion of the medical profession—a bill to require the state board of medical examiners to establish examinations in surgical work, and providing that no one could practice surgery in that state

who did not pass such examination. Outside of our profession there was beginning to be some appreciation of this difficulty, of men not properly prepared for the work being permitted to operate in the hospitals. I was impressed with the suggestion of the license by a committee of the American Surgical Association. It seems to me that some recognized general scientific body could do a great deal of good by establishing general regulations and a general board of examiners. It cannot be done in a single city or community, because of apparent discrimination against this and that individual, who has friends to be considered.

DR. A. J. OCHSNER, Chicago: The question is the question of development. What we will have in ten years from now would have been absolutely out of the question ten years ago because at that time the degree of qualification which must be taken in ten years from now would have been impossible. We must remember that we are in a condition of development at the present time. There are many cities of considerable size in this country that do not have a single surgeon who has served an apprenticeship. This system of having served an apprenticeship was a thing unknown twenty years ago, and was almost unheard of in this country, while in Europe it had been in practice for a long period of years. The system Dr. Hough suggested is an English system. In Germany the surgeon could not receive an appointment in a village or city hospital unless he had served an apprenticeship. Dr. Murphy's suggestion respecting training for at least five years is another thing that will settle this question. A man may come to your town and go into your hospital without any special training, but if he makes good and has the other qualities necessary he will afterward do that work well; in the meantime, the very serious crimes that are committed by absolutely ignorant men must be prevented by the men who have force and character. If I am called in consultation with one of these men, for the sake of encouraging operation by these incompetent men, I tell them they have no right to commit murder. For the sake of keeping his consultation business, many physicians flatter the incompetent and tell him he is competent to operate as well as anybody. One who does this is just as much to blame as the operator. It must be explained to all who allow such work that they will be the losers and that their hospitals will not have any standing.

THE PROPER DIVISION OF THE SERVICES OF THE HOSPITAL *

HENRY M. HURD, M.D.
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The old-fashioned hospital, especially the hospital which did no teaching, but simply cared for patients as they happened to be brought in, was a comparatively simple affair having medical and surgical services only. In rare instances an obstetric service was added, but as a rule the services were the two mentioned.

SPECIAL HOSPITALS

The advent of specialties resulted in considerable complication, and the claims of the different specialties have ever since been more or less urgent, depending largely on the personal equation of the specialist. If he proved to be a man of genius with a talent for organization, and filled a large place in the public eye, he generally found much difficulty in securing adequate recognition for the claims of his specialty. For this reason the original specialists deemed it necessary to establish special hospitals. Thus, for example, the eye and ear hospitals were originally established by surgeons who devoted themselves to diseases of the eye and ear. Dr. Nathan Smith, although a general surgeon, specialized largely in diseases of the eye. Dr. J. Marion Sims found it absolutely essential to organize a special hospital for gynecology because he could not get proper facilities in connection with the general hospitals in New York. Many special hospitals were similarly established in accordance with a similar condition of things which confronted rising men engaged in special work.

SERVICE IN GENERAL HOSPITALS

Within the past few years, however, there has been a notable change in the division of service in many large hospitals. In some hospitals in place of a divided service under the charge of surgeons and physicians with periods of service ranging from three to six months each year, it has been found desirable to place the medical service under a physician-in-chief, and the surgical service under a surgeon-in-chief. At the Johns Hopkins Hospital this arrangement has been carried to the extent of supplying in addition to the physician-in-chief and surgeon-in-chief a gynecologist-in-chief, an obstetrician-in-chief, a pediatrician-in-chief and a psychiatrist-in-chief. Such newer organization of the hospital has brought with it a number of complicating circumstances. It is evident that the specialist is with us to remain permanently, and the question has arisen as to how his special knowledge and skill can be utilized for the benefit of the hospital without at the same time interfering with the supervision which should be exercised by the head of the department.

DEVELOPMENT OF SPECIALISTS

It is generally agreed that specialties should develop in a natural manner out of the general subject; that is to say, to give an example in surgery, every specialist should first be a good general surgeon, and his special work should grow out of the fact that he has developed an uncommon aptitude for a special kind of surgical work combined with a superior technic which he has acquired by long and faithful practice.

I am sure that this must be recognized as the only correct view to take of the relations of the special surgeon and general surgeon; the special surgeon must develop from the general surgeon. If it is in any manner conceded that the specialist in surgery can arise without being thoroughly grounded in general surgery, or that the special surgeon can be otherwise than a general surgeon specializing in a particular direction because of his knowledge, then we may as well abandon our present conception of medical education.

All who are interested in medical education believe that without an adequate foundation of general medical knowledge and practice a specialty cannot be properly practiced or successfully pursued. In a similar manner it can easily be shown that a gynecologist should have had previously the training and practice of an obstetrician because gynecologic diseases are often dependent on obstetric accidents. Every surgeon also should be carefully trained in medicine in order that he may be able to practice general surgery and do justice to his patients in an effective way. Specialties, in other words, while necessary and most useful, cannot be considered as branches detached from medicine, surgery or gynecology, but must be grafted on a general knowledge of the healing art.

DIVISION OF SERVICE

We now approach the question: What then, should be the proper division of medical service in hospital practice? I may state, in parenthesis, that the views

* Read in the Symposium on the Relations of the Hospital to the Public in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

expressed in this paper are the result of personal observation and not in any way the expression of the views of any one else. For many years I have been familiar with hospital service and hence what I say must be regarded as dictated largely by my own experience.

I would recommend the division of hospitals into general wards and special wards or departments. The general wards should receive medical and surgical diseases. The special wards or departments should be as follows:

1. Eye and ear, nose and throat, and skin wards.
2. Children's wards, including infectious diseases.
3. Gynecologic wards, including female genito-urinary surgery.
4. Obstetric wards, including infants and nurslings.
5. Psychiatric wards.
6. Genito-urinary and venereal wards.

A word of explanation may be given as to the character of patients in the above special wards or departments. The diseases treated in a children's hospital should comprise the ordinary medical and surgical diseases of children and infectious diseases like measles, chicken-pox, whooping-cough, diphtheria and scarlatina. Small-pox should go to a special hospital.

Obstetrics should include the care of nurslings in addition to that of lying-in cases. Many excellent educators think that obstetrics and gynecology ought to be united under a common head, and several institutions have arranged for such a union; but I see many difficulties in the practical management of such a double department. While there are times when the gynecologic surgeon must be called on to repair accidents due to severe or untoward labors, it does not appear that the percentage of disorders of such origin is large. Many gynecologic diseases are due to infections of a venereal character. Carcinoma, fibroma, polypoid growths, uterine displacements and genito-urinary diseases have nothing in common with the lying-in state, and do not of necessity belong to it. All of these disorders, in fact, could be classed with other surgical disorders with as much propriety as with obstetrics. Gynecologic surgery is a branch of general surgery and ought not to constitute a separate division of the hospital.

In medicine, then, we may have all that relates to internal medicine, such as diseases of the chest and abdomen, including of course the thyroid gland, heart and lungs, stomach, gall-bladder, spleen, kidneys, abdomen and bladder, and also fevers and general bodily disorders.

The surgical department of the hospital offers in some respects greater difficulties because of the fact that a larger number of well-marked specialties have developed among surgeons.

There should, of course, be a surgeon-in-chief who has control of the department and is at the head of it. Subordinate to him, but autonomous in reference to their work should be capable assistants who can take charge of the numerous specialties which have grown up in surgery since the advent of asepsis.

There should be a good surgeon of the nose, throat, lungs and upper air-passages, a brain surgeon, an orthopedic surgeon, a genito-urinary surgeon and a gynecologic surgeon, all coordinate and each capable of doing the highest kind of work in his own department. The general surgeon should have a special responsibility for all general surgical procedures, such as thyroid operations, breast cancer, stomach, abdomen, gall-stone, gall-bladder, kidney operations and the like.

In such a division of surgical labor it is important to place in charge of the general work a man with liberal ideas and with a firm disposition to allow other men to develop to the fullest extent any special talent or inclination for a special branch of surgery. One man cannot possibly attend to these varied departments of surgery, and the greatest success can be attained only by the fullest cooperation of the different branches with each other to form surgery as a whole.

Neurology, in my judgment, should continue to be a branch of medicine, but there are certain neurologic affections which can be benefited permanently by surgical treatment alone, as brain tumors, pontine tumors, severe neuralgias and all difficulties of the pineal gland. These require surgical interference of the highest type, because so much in the way of physiology is involved in the study and relief of the disturbances of the nervous system.

Psychiatry should be absolutely separate and distinct from ordinary medicine, and no physician-in-chief can really do justice to it, owing to a lack of familiarity with mental diseases. These diseases are connected with other medical branches, including medicine, surgery and gynecology. Psychiatry receives aid from all these and in turn must sometimes be called on to help out difficulties which are found in the treatment of ordinary diseases.

RECAPITULATION

To recapitulate, we must have a general hospital with five divisions: medicine, surgery, obstetrics, psychiatry and pediatrics.

The medical department should comprise diseases of the head, chest and abdomen; of the stomach, bladder, the blood and blood-making organs; and the infectious diseases, such as rheumatism, gout, rheumatoid arthritis, parasitic diseases, diseases of the kidneys, intestinal diseases and nervous diseases.

The surgical department should comprise general surgery and the specialties of brain surgery, surgery of the nose and throat, chest surgery, orthopedic and genito-urinary surgery and gynecology.

The obstetric department should comprise the lying-in cases and the care of infants and nurslings.

The psychiatric department should comprise all mental diseases.

The pediatric department should comprise all diseases of children, including the eruptive diseases of children, scarlet fever, diphtheria, measles, chicken-pox, etc.

Many of these specialties are so important and combine such a variety of most useful material for teaching that it may be wise in many instances to make subdivisions within the specialties. The above arrangement is suggested more with the idea of exciting debate and stimulating inquiry than as a definitive arrangement. The ultimate division of service in each department must be largely left to the head of the department.

DIVISION OF CASES

Let us now consider for a moment the question of the division of cases between the different departments of a hospital. There is apparently no more vexing question to the gynecologist than the bounds of his surgical efforts and aspirations. Does he have any rights in the human body beyond the confines of diseases peculiar to women? He is constantly reaching out for new fields to conquer, and often calls himself an abdominal surgeon with all that is implied by the name. He operates on the kidney, drains the gall-bladder or removes gall-stones, removes the appendix or seeks after the elusive duodenal or gastric ulcer with all the zeal of the general surgeon. I am

inclined to think that he ought to be satisfied with his original domain, and that he is not called on to invade the territory of the general surgeon. The obstetrician sometimes has serious doubts as to the gynecologist's territory and is inclined to annex his present field of operation to obstetrics, yet I cannot help feeling that the assiduous practice of obstetrics with its wearing and prolonged nervous strain and its undue proportion of night work is incompatible with the pursuit of gynecology, with its equally harassing duties. I am clearly of the opinion that a line ought to be drawn between the two departments. For this reason I have come to the conclusion that gynecologic surgery ought to rank with other surgical specialties as I have already stated.

To whom shall we commit the duodenal and gastric ulcers? Manifestly, I reply, to the medical man until it is apparent that rest, proper food and suitable medication cannot work a cure. As soon as this becomes evident the surgeon should step in.

It is now generally agreed that appendicitis ought to have early surgical treatment, and the same is true of such disorders as gall-stones and kidney stones. The dangers of delay and the advantages of prompt surgical interference are much better recognized than formerly.

ABSTRACT OF DISCUSSION

DR. ALBERT JOHN OCHSNER, Chicago: The hospital must work on a systematic plan. So far the development has been personal; surgeons have developed the departments in which they are most skilled. This has built up badly balanced institutions, and unless some form of standardization is applied to an organization of hospitals, the further development from now on cannot be so satisfactory as it ought. Twenty years ago many of the best-trained surgeons drifted into these departments and developed a remarkable degree of progress; but these men introduced primary principles that were good surgery, and as a result they had to drift back into general surgery, so that now the best gynecologic surgeon is the best general surgeon.

Patients are classified in most institutions by some person who knows nothing about diagnosis, and too frequently they are reclassified until they reach some point at which they receive the proper treatment, or are treated without the proper attention. Patients should be classified by men who have had at least five years' experience in acute diagnostics in some hospital and who know their business under the chief. I never send a patient into any department whom I have not examined personally and without putting my diagnosis in a sealed envelope; then the chief makes his diagnosis and compares it with mine. If I have made a mistake in my diagnosis I am going to hear about it, and if the chief has made a mistake he will hear it, as young men in the hospital are going to gossip, and that is what will keep him to his work and me to my work. If the chief has not time to examine each case he is not the man to be chief of the department.

DR. J. A. HORNSBY, Chicago: When hospital services are broken up into three months' services with enough men to take in the year, results will be unsatisfactory. If men cannot be kept busy in their own hospital they will keep busy somewhere else. The short-term service is based on the commercial idea that a sufficient number of men must be interested to bring in their private patients to keep the hospital full; but I do not believe it works out that way. I do not believe there is a hospital, excepting in the small towns, that need be suffering from want of funds. All that is needed is to convince a philanthropic person that something is being done for somebody who really needs it.

Men should be kept on the service throughout the year. The services may be indefinitely divided; let one man take gastric ulcers that go clear along to carcinoma; let him work them up. In the course of a year or two he is going to have a number of ulcers from their incipiency to the operating-table. He will attract attention if he is a worker and will soon have more cases until finally his experience will make him the best man for the place. When the work done in a hospital is known all over the country that hospital will be full of patients.

DR. C. A. DREW, Worcester, Mass.: Different hospitals must meet these problems differently. An incorporated hospital, supported by private funds, in a large city is different from a municipal hospital or a hospital related to a medical school. The hospital in which I am most interested is in a city of 150,000 with three other hospitals; there is no medical school. Our staff is appointed from men who have served in the out-patient department; no one has ever been appointed who has not been approved by the staff, though pressure is brought to bear to have an "open hospital." A municipal hospital is supported in large part by taxation, and men who are not on the staff think that they should be permitted to send their private patients to that hospital, and that the patients should have the right to choose their own physician. An endowed hospital would not consider the question seriously, but with the municipal hospital it is a serious problem. Pennsylvania has tried to pass a law that each patient may have his own physician.

Our hospital has rotation in service. This is another problem that would be different were the hospital not municipal. We have a majority of the most skilful physicians in the city on our staff, but there are many who think they have as much right as the men on our staff to practice in the hospital.

DR. H. M. HURD, Baltimore: We are met here together as a body of hospital workers to consider ideal conditions—conditions which are best for the patient; we are not actuated by personal motives or political motives or a desire to do somebody a favor. We believe, as hospital men, that the object of the hospital is to do hospital work in the best possible way. We wish to benefit the patient, not primarily the physician, and to do our hospital work in such a way as to demand the support and confidence of the community. The only way to secure this is to do those things which are right without catering to a physician or to a religious denomination. What Dr. Washburn has said in reference to raising the standard of nurses illustrates what I had in mind. Many hospitals find it necessary as a matter of policy to take women under age, with inferior education, without good home surroundings, and without those antecedents which we believe are necessary to make the best nurses. They have nurses of the servant-girl type, educated in small private hospitals, nurses who have been invalids from tuberculosis hospitals, and having taken that class of nurses, are clamoring for a lower standard of nurses. Many small hospitals have inferior nurses because they are not giving the right sort of training. Hospitals which have raised the standard of training and preliminary education find plenty of good women from whom to choose. The same is true of interns in hospitals—if the standard is lowered, poor men are obtained; if it is raised, better men are attracted.

Ventilation of Out-Patient Departments.—In the planning of the wards of American hospitals the need of fresh air is rarely overlooked; the problem may not be solved, but an attempt to solve it is invariably made. But in the planning of out-patient departments, where the need of ventilation is singularly pressing, American hospital architecture is lamentably deficient. The prevailing indifference to the ventilation of the out-patient department is part and parcel of the relative neglect of this department in matters of administration generally. It is no uncommon thing in this country to observe a hospital whose in-patients are cared for in accordance with the highest standards, but whose out-patients are accorded the most niggardly treatment possible. In this respect, if in no other, American hospitals and their architects may go to school to England, where out-patient departments and hospital wards are planned with equal care.—S. S. Goldwater: Notes on Hospital Planning; *The Brickbuilder*.

A FEW PROBLEMS OF HOSPITAL ORGANIZATION *

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STAFF ORGANIZATION

The problem of the organization of the hospital staff is one of wide-spread interest, if we are to judge by the number of articles written on the subject. We propose to give a brief discussion of the existing systems, with a statement of the attempt which has been made at the Massachusetts General Hospital to solve this problem. The usual form of staff organization in the United States is that called "rotating." Under this system the beds in the hospital are divided into a certain number of services, to each of which several physicians or surgeons are allotted. One member of the staff of each service has charge of its patients for a given period, usually three or four months, when he is succeeded by another member of the staff who has charge for a like period. The arrangement is generally such that a man has but one shorter or longer term of duty each year. Let us enumerate the advantages which may be claimed for this method. The physician may devote a certain amount of time to charity work without interfering too much with his private practice. As a large number of men are necessary to man the hospital, and they are chosen from the local practitioners, the hospital is widely represented in the community and many people are interested in it. This method gives opportunity to a number of men to become proficient. Against this form of organization several arguments are brought. The interruption in service does not permit the careful following out of a group of cases, investigation of methods of treatment or pieces of research. Many become proficient; rarely does one excel in a chosen line of work. Patients may suffer in that a man would not be so interested in the cases which are bequeathed to him by his predecessor as in those admitted to his own service. This method does not make for good teaching, granting that teaching benefits a hospital. Positions on such a staff might be given for reasons which were not entirely ethical, such as to attract private patients, to obtain the interest of wealthy or influential persons, or they might be obtained through politics.

The rotating service may be considered one definite type. Another type is the continuous service. This form of organization is the one prevalent in Germany, whence marked advances in medicine have come. This method consists of an arrangement such that there is a definite head for each major department who has a continuous service throughout the year, with assistants usually chosen by himself. The head of each department is chosen because of his acknowledged distinction in his line and fitness for the position, and not necessarily from the local profession. The advantages of this arrangement are that it enables one man with his assistants to follow for as long a period as may seem best a group of cases, method of treatment or a piece of research. It gives men the opportunity to add to the distinction already gained, and to become eminent in some one or several lines of work. Patients are under careful, continuous observation. Teaching can perhaps be better carried on under this system. It is argued that this method is financially more economical.

Against this arrangement certain arguments may be alleged. It does not interest a sufficiently large part of the community in the hospital. It enables only a limited number of physicians to receive the benefits which come from a hospital. The scientific attitude of the men in charge does not make for the best care and greatest happiness of the patients entrusted to them.

In addition to these two well-defined arrangements there are some hospitals in which part of the services is continuous and part rotating. It is interesting to note that the search we made of the literature revealed only two articles in which the rotating service was defended, and none in which the utilization of hospital facilities for teaching was considered other than beneficial to the hospitals as well as to the medical schools.

We have not discussed the organization of the "open hospital," by which we mean a hospital which permits any reputable physician to care for his patients in its wards. Our reason for not considering this type is that we suppose that no one would claim that such an organization makes for the best care of patients or progress in medicine.

Two suggestions which we found we will mention as interesting. In one paper, in which a position in favor of the continuous service was strongly taken, the writer stated that the right to inherit a position should be entirely eliminated, and that there might be a great strengthening all along the line if the rule were made that no assistant could ever succeed his chief. The second suggestion was that the staff of the hospital (in this case, municipal) have a continuous service, with a senior and junior attending physician for a certain number of beds, that a man should spend five years as junior and then five years as senior visiting man, ten years in all, and that at the end of this time he should cease to be on active duty. The advantage claimed for this was that at the end of ten years a man will have acquired all that the hospital can give him, that his practice by that time will require all his time, and that this method gives an opportunity to a large number of men.

At the Massachusetts General Hospital an attempt is being made to obtain the advantages of both the rotating service with a staff of men sufficiently large to keep the community interested, and to furnish it with proficient physicians and surgeons; and the continuous service with its opportunities for marked improvement of the men along special lines, and its convenience for research and teaching.

The medical and surgical services are large enough so that each has been divided. Thus we have two chiefs on the medical service and two chiefs on the surgical service. We will not consider the office of surgeon-in-chief, which has no place in the permanent organization, as it is not to be filled when the present occupant retires. On the surgical side are two subsidiary departments, those of orthopedic surgery and genito-urinary surgery, each with its chief and his assistants. On the medical side is the subsidiary department of pediatrics with its chief and his assistants.

The special departments of neurology, dermatology and laryngology are also reorganized with chiefs of service on duty throughout the year.

On each service under the chiefs are two visiting physicians or surgeons serving six months each. These men have the routine care of such patients in the wards as

* Read in the Symposium on the Relations of the Hospital to the Patient, in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

are not otherwise assigned by the executive committee. Then each service has its own assistant visiting physicians or surgeons, out-patient men and assistants.

There is a medical executive committee composed of the two chiefs of service and the resident physician (the title of the superintendent of the hospital), a surgical executive committee constituted in a similar manner, and a general executive committee of six members made up of the two chiefs of the medical services, the two chiefs of the surgical services, a chief of one of the special departments elected by them, and the resident physician. The resident physician is secretary of the three committees. The management of the medical and surgical affairs of the hospital is entrusted to these committees. It is hoped thus to get cooperation. Groups of cases are assigned to individual men throughout the year. On the surgical side, for instance, one man and his alternate have all the stomach surgery, another two men have the surgery of the brain and spinal cord, and other special problems are similarly treated. It is hoped to retain the advantages of proficiency in general surgery and at the same time make certain men expert in special branches of surgery.

There is a retiring age of 60 years and there is a rule of the trustees that vacancies on the staff are to be filled by the person most worthy without regard to seniority. The hospital stands ready to call suitable men from other cities and appoint them to its staff, when this can be shown to be advantageous. A more definite connection has been secured between the house and out-patient services as the chiefs are responsible for both.

Our experiment is as yet too young for final judgment. It has been in operation ten months on the surgical side and is just beginning on the medical side and in the special departments. We feel that we can say that there have been markedly better results in the treatment of patients in the groups of special work. This is a long step in advance.

The change has been attended by some heart-burnings, as was to be expected, but the spirit of the staff in putting the interests of the hospital before their individual interests has been admirable. The problems which arise are many and delicate, but on the whole we are making progress in their solution.

THE RELATION OF A HOSPITAL TO A MEDICAL SCHOOL

We believe that it is generally accepted that a medical school is definitely helped by a hospital connection, for the arrangements are usually such that the professors and assistants in the medical school have clinical positions in the hospital, and the value to the students of bedside teaching and work as clinical clerks is great. The benefits to the hospital come through having men of eminence on the visiting staff, and from the presence of students in the hospital which assures to it that all the members of the staff will be kept on the *qui vive* and that the patients will be carefully and thoroughly studied from all points of view.

Complaint has been made that men who are connected with both a medical school and a hospital are more likely to let the latter than the former suffer, if one is to receive less attention. This should not be so. To avoid the possibility of this it may be wise to make arrangements so that the appointee shall feel that his appointment comes from the hospital quite as much as from the medical school, if not more. We doubt if an arrangement between a hospital and a medical school by which the members of the staff are to be chosen by the hospital from candidates furnished by the medical school would bring about this desired end. The large privately endowed general hospitals of America which have grown up independently of medical schools are probably as well off if they preserve that independence. The man whom the school would appoint professor of medicine or surgery does not necessarily possess the qualities desired by the hospital for a chief of its medical or surgical wards. The hospital needs a man with broad humanitarian principles, and one who can direct and stimulate the work of the men under him. If he is a teacher so much the better. If he is a teacher but not fitted for chief of service, he may well occupy another position similar to that of visiting physician or surgeon at the Massachusetts General Hospital, whereby he would have a six months' service; and he should be granted use of teaching material throughout the year. If a hospital and medical school have the spirit of cooperation, their interests are nearly enough identical so that nominating committees of the two working in harmony should have no difficulty in reaching conclusions satisfactory to both.

The matter of the expense of teaching medical students in hospitals is a serious one. The wages of nurses, orderlies and other attendants, and the cost of supplies used by students or because of teaching, make considerable items of maintenance. The medical school should recompense the hospital for this service. The cost of erecting amphitheater and special rooms for teaching may well be borne by the hospital if it preserves its independence. The fact that there is teaching within its walls makes the hospital enough better to warrant this expenditure. If a hospital accepts from a medical school money to build laboratories and rooms for students, it really becomes a part of the university and should expect to give to the medical school some rights of nomination.

TRAINING SCHOOLS FOR NURSES

It seems wise to us to have the training-school an integral part of the hospital, as making for the economical management of both, for efficiency and for good discipline. We feel that the superintendent of nurses should be responsible to the superintendent of the hospital directly; but we feel that as superintendent of nurses a woman of such caliber should be chosen that she can be allowed to work out most of her problems herself. We feel that the educational standards for nursing should be kept high, inasmuch as in private practice more careful and intelligent observation, and more logical deductions from them are demanded, and in the other lines of work which are open to nurses, such as hospital administration, teaching, superintending of operating-rooms, district nursing and social service work, a high degree of intelligence and previous preparation is requisite.

With the increase in the number of training-schools and of places open to nurses has come a greater demand for probationers, so much so that many institutions have great difficulty in keeping an adequate corps of nurses on duty. The experience of the Massachusetts General Hospital on this point may be of interest. Since the admission requirements have been raised, the amount of teaching increased, and the hours of work shortened, the hospital has had so many applicants that it has been possible to pick and choose probationers, a condition which did not exist before these changes were made. This has increased the cost of maintaining the training-school, but the nursing is now done better than previously.

We appreciate the fact that many small and special hospitals cannot hope to attract intelligent and well-

trained women. Such hospitals would do well to realize that if they cannot furnish the necessary education and broad curriculum either within their own walls or by affiliation, they should not maintain training schools for nurses. Such hospitals should go to the expense of hiring graduate nurses. They may well train attendants.

Our object in this paper has not been to try to cover all or a large part of the problems of hospital organization, but to state three which we consider of major importance and to give what seems to us a feasible solution of each.

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ABSTRACT OF DISCUSSION

DR. C. H. COOK, Natick, Mass.: Patients in towns have a right to good care, which is often best supplied in a hospital, yet we are told that the small hospital should not have a training-school but should depend on graduate nurses. Where are the funds coming from to run such a hospital if the nurses are to be hired? The expense would be prohibitive; the small hospitals would be closed, and lives would be sacrificed that now are saved. Patients in the small hospitals receive better care from the student nurses, under supervision, than from graduate nurses, because graduate nurses cannot be hired to do what the student nurses do; they will be more independent. Graduates from an efficient small hospital training-school are better qualified to prepare an operating-room for an operation, or to make similar preparations in a private house, and to assist the surgeon during the operation than are the graduates from the larger hospitals because they have been trained, to a greater extent than are the graduates from the large hospitals, to assist the surgeons, as in the large hospitals the interns render such assistance.

DR. F. A. WASHBURN, Boston: There are small hospitals and small hospitals. Those to which I referred should not have training-schools. These are the small special hospitals that are run for the benefit of one man. A small hospital can run its training-school so as to give the nurses good fundamental training; then they can go to some larger hospital for training they cannot acquire in the small hospitals; but these are hospitals in which the nurses are simply exploited and these schools should go out of existence.

THE MEDICAL SUPERINTENDENT *

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Whatever business a man takes up, the better informed he is in regard to it the better he ought to be prepared to accomplish that work in a satisfactory manner. When a man has spent eight years in acquiring a medical education, it seems at a casual glance like a waste of that education, to apply it solely to the business part of a hospital, and it is, if a medical man cannot be of more use to an institution as its superintendent than a layman can be. If a hospital does not afford an opportunity for applying his medical knowledge, then, to deal frankly with the case, that institution should not have a medical superintendent. There are many good uses for a medical education besides the direct treatment of patients.

Not long ago I was in conversation with a medical superintendent of a large general hospital, and we were discussing the subject of interesting a bright young physician to enter the life of executive work. When we were in the midst of the conversation an older man appeared who had spent his life in executive work in insane and general hospitals. His attitude surprised us. He said that the young man in question was too brilliant for executive work — that he was capable of becoming a first-class clinician. His attitude, I think, is fairly typical of that of a large class of physicians and trustees; that the best brains should not be induced to enter on the executive work of a hospital, whereas, for managing a college or university the man with the utmost ability is sought.

THE HOSPITAL EXECUTIVE SHOULD BE A PHYSICIAN

I am one of those who believe that a general hospital in its executive work does present an opportunity for using all of the ability that any physician possesses. I do not believe that a medical education is wasted if the possessor applies himself diligently to the management of a general hospital. The man who feels that it is below him, that he is engaged in something that he does not prefer, is pretty sure to do his executive work at such arm's length that it will not be successful.

* Read in the Symposium on Relations of the Hospital to the Physician in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

I have endeavored for the last twelve years to induce the brightest men that I could get to enter executive work and tried to impress on them that there is no part of the work in a general hospital that is beneath their serious study and consideration. When you once get a man to assume this attitude — that it is a serious business, and that the minutest details are worthy of serious consideration until it is established on a sound basis — he will then dignify the work so that our brightest men, not only among the staff but physicians outside, become interested and the executive position is elevated.

We must remember that there was a time when the medical and surgical profession was looked down on by what was called the highest class of society. The physician or surgeon was not thought worthy of being invited to the table of the better class of people. This attitude toward the profession has not entirely died out in some countries of the world.

I honor the medical and surgical profession more than any that I know of and I believe that by running a general hospital as a serious business I can aid medical and surgical advancement as much as I could in any other way.

There are those who are not suited to executive work. It is a mistake to induce a man to take up this work if it is distasteful to him, but if he has the proper characteristics he will find that in the running of a general hospital there is plenty of opportunity for the application of all the medical knowledge he may have acquired.

ASSISTANTS SHOULD DO MEDICAL WORK

Some twenty years ago I became the superintendent of an institution in which I had previously been, as first assistant, responsible for the medical and surgical work. I accepted the superintendency under the misapprehension that I could delegate to some one else the business part of the institution, and that I could still devote myself to the medical and surgical work. I am certain that I never would have accepted the superintendency if I had not been convinced in my own mind that this was possible.

The superintendent of a large institution is responsible for all the contracts for supplies, and for the conduct and efficiency of all the employees. I found within three months, much to my disgust, that I was no longer of that use to the patients that I had been; that, in spite of all my efforts, details of contracts, prices of materials, and in fact the financial complications of the institution would run in my mind when I was examining a patient and trying to give my best attention for the benefit of that patient. I then made up my mind to throw the responsibility for the medical and surgical work of the institution on others; that having a medical education I ought to be preeminently fitted for selecting able and efficient assistants, and that I would devote myself to the business end of the institution to make that efficient and economical, in order that it might furnish many things it never before had been able to furnish. Since that time I have devoted myself to the management of hospitals, and I have been convinced that my medical education has been an assistance rather than a hindrance.

The insane hospitals of this country have medical superintendents universally, so far as I am aware. These medical superintendents are supposed to be at the head of the medical work, experts in psychiatry, and also to be the head of all the business of the institution. This seems to result in some cases in the neglect of the business end of the institution for the sake of the medical, and in others the emphasizing of the business end to the neglect of the medical. In other words, it is well-nigh impossible for one man to be really responsible for the business of a large institution and to be its actual medical leader also. It is rather amusing to see the assurance with which some men try to convince you that they occupy such a position successfully. We who know the facts realize the impossibility, and I believe the time will come when the superintendent of the hospital will not actually assert that he is the leading psychiatrist in his institution, but that he simply selects able physicians to treat his patients and from his medical knowledge is able to judge whether they are proper persons to do it.

General hospitals, on the other hand, have done quite the opposite from the insane hospitals.

QUALIFICATIONS OF THE SUPERINTENDENT

The modern general hospital is quite a different institution from what it was fifteen years ago, and there is plenty of work to tax the energy and ability of the best-trained man in the management of such an institution. In the first place, the hospital should be a first-class hygienic machine. The superintendent should be a judge of all the elements that enter into this hygienic machine — the cubic feet of space for each patient, the proper ventilation, the machinery or equipment for doing the medical and surgical work, and the necessity of having laboratories for pathologic work, for physiology and for chemistry — so that he may be of assistance in giving his trustees proper advice as to the necessities of these adjuncts in running a first-class hospital.

Physicians not infrequently are poor business men, and not infrequently look down on the traits that make good business men; when they assume this attitude they are sure to make poor superintendents. They do, however, by education necessarily know more what the needs of a hospital are than a layman can hope to learn, and a resident staff will allow them to attend to certain kinds of business which interlace with medical knowledge, whereas it would resent a lay superintendent's attending to the same business. If a staff is to give its best efforts to the treatment of the patients it needs to be relieved of every possible business detail. The reason that this subject is open to discussion at all is that the least efficient medical superintendent is often compared with the best lay superintendent. One reason that women nurses make such good superintendents of hospitals is their practical medical knowledge acquired from long experience and close association with the patients and physicians.

The hygiene of a hospital should be perfect, and medical knowledge is essential in keeping the hygiene up to a high grade.

A medical superintendent can admit patients and place them with comparative accuracy, while, as a rule, when a lay superintendent is employed this part of the work is turned over to inexperienced members of the staff who usually do it crudely because they consider it drudgery.

The question between the lay and medical superintendent, as a rule, comes up as an item of expense. Some hospitals do not feel that they get an advantage for the extra salary paid to the medical man. As a matter of fact, they should, and if they do not, I believe this to be a fair criticism of the medical superintendent.

Not all our institutions are run on a good business basis. It is our habit to compare one with another, when the institutions are similar, by simply giving the per capita cost by the week or by the day; and the one that is running at the least per capita cost, in a general way, is supposed to be the best-run institution. Yet it is perfectly well known by every intelligent superintendent that some institutions which are conducted at a low per capita cost have extravagant departments.

There should be some method evolved by these highly trained superintendents by which this per capita cost could be analyzed and the finger put on just that part of it which is excessive. Thus there would be a chance to study that department and improve it. This studying and analyzing the per capita cost, after a while, produces a standard to which every intelligent man should be obliged to conform or he should have to explain why he cannot. Many English institutions have arrived at these standards. In conversation on the subject, more than one Englishman interested in hospitals has produced from his pocket a little book which would give a correct analysis of his weekly per capita cost: what percentage was tea, coffee, milk, butter, nursing, heat, etc. Your reader will have to acknowledge that he has contented himself with trying to run his institution economically and efficiently, without creating a standard to which the individual articles that made up the per capita cost should conform.

Every hospital is supposed to exist for its patients. If it cares for its patients well and scientifically, its reputation should grow, and on the average it does grow. It has been found to be better for the hospital and the patient that teaching should be done in the hospital. In its laboratories all scientific work allied with the treatment of the sick should be carried on. That this work adds in the long run to the light that can be shed on the patient's case, in diagnosis and treatment, is well known.

It would seem that the superintendent who would best understand this scientific work, this medical and surgical work, would be the best judge as to what the needs of a hospital are and in that way would have a clearer view as to what should be done to aid its patients and to give them the best care. This care of the patient, as physical, medical, or surgical, is more or less supervised by the chief surgeon and chief physician, but they should be assisted from the administrative side, and light should be shed on the efficiency of the care and treatment of the patient, so far as it can legitimately be done, from the point of view of the superintendent. I do not mean by this that the superintendent should interfere in the treatment of any individual case, but his inspection should show him whether patients are attended to promptly on entrance or whether there is probable neglect or delay in caring for the patient during any part of his stay in the hospital. A superintendent without the medical education cannot give this sort of service, which I believe to be the highest service that can be given by the superintendent because it conserves the time of the chief surgeon and the chief physician.

The superintendent who knows most about the medical and surgical work has the clearest view of the needs of the institution, and the highest incentive, therefore, for conducting the business on economical lines so that money thus saved may be expended in the actual need for further development.

If this paper, by suggestion or otherwise, has raised in your minds a clear picture of the complicated medical machine that a modern general hospital is with its ramifications on one side into the various scientific laboratories, and on the other side through its social service into the defective and diseased parts of the community, then I will leave it to you whether it is not worth while that the superintendent of this machine shall be required to have a medical education.

ABSTRACT OF DISCUSSION

DR. H. M. HURD, Baltimore: I have always been in the habit of saying that the most necessary thing in a hospital is a medical superintendent. Some years ago in the hospital of a neighboring city the question came up as to whether the superintendent should be a layman or a medical man and the board of trustees, after much discussion and effort to get a layman (they were business men who had an impression that no physician could be a business man), finally were compelled to choose a physician and later came to the conclusion that a medical man was absolutely essential, because a layman could not decide the necessities of a hospital from the standpoint of the medical men. I always urge that teaching hospitals have a medical superintendent. In other hospitals, where there is no medical teaching, it is not essential; I know many hospitals where I am sure a trained nurse makes the best superintendent. Where a hospital is small and the funds are low, the same person can act as superintendent of the hospital and as superintendent of nurses. Where a hospital has from 150 to 200 patients and it is necessary that the superintendent should attend to certain duties in the house and outside, I see great advantage in appointing a layman. It is rather interesting to see how different cities of the country have varied in their appointment of superintendents. Many years ago, the general hospitals in Boston had medical men as superintendents; New York had only lay superintendents. Recently in New York medical superintendents have been appointed in many of the large hospitals, although excellent men are still in charge of hospitals who are not medical men.

DR. ELSWORTH SMITH, JR., St. Louis: In St. Louis, in our large general hospital, as far back as 1887, when I was an intern, we have always had a medical superintendent. He has also had charge of both the care of the patient and the business end of the institution. Recently, after reorganization, the first appointment was of a man as superintendent who is a cross between a medical man and a layman, a dentist. This did not work very well and there now is an excellent medical man as superintendent, besides a medical man who is at the head of the medical part of the work, a supervisor of wards, and of course, a large visiting staff. I am connected with a hospital that is under the care of the Sisters of Charity. There a sister is in charge as superintendent, who has entire control of the institution, both the business phase of it and the medical phase by consulting with the staff. While she is a woman of great ability and one who wants to appreciate the highest ideals, she is nevertheless handicapped because she is not in a position to understand the needs from a physician's point of view. I feel that in any institution of great size, especially a teaching institution, a medical superintendent would be preferable.

DR. G. W. GREEN, Chicago: There are a great many of the smaller hospitals that Dr. Hurd mentioned with fifty to 100 beds that cannot afford medical superintendents. They are compelled to have a trained nurse fill this position. Eighty-seven per cent. of hospitals have 100 beds or less; so there must be a considerable number of superior trained nurses to keep these positions filled, for they cannot afford medical superintendents.

DR. J. A. HORNSBY, Chicago: Some years ago a hospital in a city of 350,000 was about to change its superintendent; the superintendent, who had no medical training, but who was supposed to be a very good business man, got into

trouble with the medical staff and they wanted to get somebody else. They asked me to give them some advice. I suggested a medical superintendent; they said that they could not afford to pay a medical superintendent, they could not afford to pay more than $1,800 to $2,000 to anybody. I said I thought they could afford to pay $3,000 or $4,000 to start with; I advised them to gamble on it for one year and if, at the end of the year, they found they had made a mistake, they could go back and get somebody for $1,500 or $1,800, or perhaps $75 or $80 a month, because it had been said that one of their number had to go to the hospital every morning before he went to business to give directions for the day's work. They gambled that year. They got a man I recommended to them and paid him $4,000 salary and at the end of the year they made him a little raise. They found in the course of a year that this superintendent had won a place for himself; that he had become one of the lights in the community without butting into the business of the medical staff; he had displayed business acumen and ability, coupled with diplomacy, and after all had made good within one year. That man had met all the people in the community, and the women in the community would do almost anything he wanted them to do. He could attract philanthropists and people of means and get them interested, so that his salary had become a matter of little moment, for the money he had attracted and the popularity that had come to the institution because of his being there, had more then repaid them for that little advance in salary.

DR. P. E. TRUESDALE, Fall River, Mass: To my mind there are few jobs which demand a wider range of average good qualities than that of the hospital superintendent, especially in large institutions. This executive needs a keen sense of values; the ability to size up people and everything that comes with them; to rate physicians, nurses and employees for the main purpose of getting from them their best work. Physicians generally are considered poor business men, and are looked on as easy victims by promoters of all shades. There is no rational excuse for the doctor failing to employ average good business methods in his practice, and cultivating a sense of discrimination in finance as well as in medicine. The business ability of the hospital superintendent, however, needs to be of high grade, and possessing a medical education in addition best prepares him for a career of splendid achievements.

INDIVIDUAL PROPHYLAXIS IN CHILDREN'S HOSPITALS *

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Institutions for the housing and treatment of infants and children are constantly subject to local epidemics. Every one who has had experience in the administration of children's wards or pavilions knows how the service is frequently interrupted by the occurrence of an infection or a contagious disease which is soon followed by an epidemic of contagion.

In many of our American institutions in which the facilities for the care of infectious diseases are meager, or entirely lacking, the hospital is thrown into consternation when infection occurs. Nothing will so quickly disorganize the efficiency of a children's department as one of these epidemics.

It is a well-known fact that hospitals and asylums for infants and children have been closed or abandoned on account of the ravages of contagion. It is unfortunate to be compelled to close, and the proper quarantine of nurses and interns becomes a serious and difficult problem. When one figures in terms of money outlay the occurrence of such an epidemic it is plain that it is costly from the standpoint of administration. The hospital is compelled to operate, as a rule, without the possibility of admitting new patients, the cost of maintaining the quarantine is considerable, and the subsequent disinfection and renovating are considerable items of expense.

MANNER OF INTRODUCTION OF INFECTIONS

Contagion.—An infant or child may be admitted who is suffering from the prodrome of measles or scarlet fever; or he may come from a home where other children have been ill from one of the infectious diseases, where he already has been exposed to contagion; or at other times a patient is admitted with a latent infection. Thus, an infant may be admitted with an inactive vulvovaginitis, or another may enter who has recently recovered from diphtheria with virulent Klebs-Löffler bacilli still present in the throat; or a child may show slight desquamation after a scarlet fever; or a young infant with an unrecognized, though open, tuberculosis may be admitted into the general ward. These conditions may be communicated to other infants in a manner which we will consider later.

Visitors.—It is safe to say that visitors at times bring infection into the wards; indeed, the matter of visitors and visiting is a problem in the administration of children's hospitals which requires the most delicate treatment. It is no small matter for parents, in most instances, to give up the custodial care of their children to an institution. To be denied the right to visit them would entail a hardship on parents which would seem almost inhuman.

I have sometimes thought it would be a wise precaution to request visitors to remove their outer garments, and clothe themselves in clean white caps and gowns and cloth coverings for the shoes before admitting them into the general ward. While this could be carried out it would meet with some objections on the part of the visitors and might for a time tend to diminish hospital patronage. More than anything else it would increase the already large expense account, though I think that in the end the cost would be overbalanced by the loss sustained in shutting down.

There is another and more vital reason why strenuous effort should be made to prevent infection. The most neglected and severest cases find their way to the children's wards of our various hospitals. Children suffering from rickets, pneumonia, tuberculosis and marasmus offer little resistance to infection with diphtheria, measles, scarlet fever, whooping-cough and the other communicable diseases. It is obvious that the mortality from these cross-infections must be high; and any one who has suffered the personal mortification of witnessing a pestilence sweep through the wards, and who has felt the reproach from parents, and sometimes from the board of administration, knows how indescribably sad and depressing such an occurrence is. The so-called gonorrheal vulvovaginitis which frequently finds its way into the wards of infant's and children's hospitals is one of the most dreaded and most difficult to manage of all infections which we are called on to meet. Once it has gained access it is likely to spread from one infant to another until the female occupants of an entire ward have become infected. These cases run a protracted course and offer the greatest difficulty to hospital administrators. To send these children to their homes frequently means the infection of other children in the family. It is difficult to see how infection can be avoided

* Read in the Symposium on Relations of the Hospital to the Physician in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

in homes where ignorance, filth and squalor exist. An infection of one or both eyes may occur, or more rarely a joint-involvement, or occasionally some gonorrheal complication may take place. To keep such children in the public ward is impossible, yet to send them into isolation means not only that they should be kept from children not previously infected, but that they should be given care and treatment for months or even years. It is obvious, then, that it is the highest function of a hospital to prevent the spread of this contagion.

Diphtheria.—The management in diphtheria frequently presents the most difficult problem for solution. Occasionally a child is admitted with a nasal discharge which after investigation is found to contain diphtheria bacilli. As a matter of actual experience other patients may become infected before the nature of the disease has been suspected or ascertained; but strange to say, the bacilli of diphtheria seem to travel and diffuse themselves more rapidly than does the actual disease. For example, there may have been one or two well-defined cases of diphtheria in the ward. If cultural examinations be made from the throats of all the children in the ward one is frequently surprised to find that almost every patient gives a positive cultural reaction, though without the occurrence of membrane or sore throat. If the same tests are made from the throats of nurses and interns positive results are obtained frequently. We have then to deal with a wide-spread diffusion of diphtheria bacilli in throats of patients, interns and nurses who are not definitely sick with diphtheria. Careful study in the laboratory shows these microorganisms to be morphologically diphtheria bacilli, and animal experiments have attested to their virulence. The problem which requires solution from the administration is: Can new patients be admitted into the infected ward safely? Should interns and nurses who show the presence of this microorganism be allowed to mingle with other hospital attachés in other parts of the house? Should we permit those whose throats are infected to share the sleeping-chambers and dining-room with those who are not infected? The solution of this whole problem is difficult, because by closing down we are resorting to extreme measures; but nothing short of complete quarantine ensures safety to other children and attendants and prevention of contagion. Quarantine and isolation should continue until the organisms have disappeared from all the throats.

Not the least provoking thing in this whole situation is the persistence which these organisms show; sometimes two or three weeks elapse, or even a month, before the bacilli have disappeared. It should be emphasized that the presence of diphtheria cannot be excluded simply because bacilli are not found in one single cultural test. Repeated daily examinations are necessary. At least three negative cultures should be required to exclude diphtheria.

The thought almost immediately suggests itself that the diphtheria situation could be handled by administering diphtheria antitoxin to all those who have been exposed to the infection, whether throat examinations show the presence of diphtheria bacilli or not; but, as has been stated, in some of the epidemics which I am referring to only a few of the patients have been actually sick with diphtheria. We know, too, that the diphtheria bacilli persist and may remain virulent to others after the patient has been treated and cured with antitoxin. In this sense antitoxin is antitoxic but not bactericidal, and recently our respect for antitoxin has increased. We have learned that its indiscriminate use may produce conditions which at times are undesirable, or indeed alarming, and clinicians as a rule would use it in those cases only in which it was clearly indicated.

If a single case of infectious disease occurs it is needless to say that it should be removed from the general ward as soon as possible. In the case of a diphtheria epidemic, throat cultures should be made from all those who have been exposed in the ward. In any event if one or more positive cultures have been obtained it would be well to close the ward temporarily in order that it may be kept under observation and the further progress carefully controlled by making daily throat cultures, and by a system of isolation and general prophylaxis. Ordinary gargling and spraying with the antiseptic substances in general use do not seem to destroy diphtheria bacilli. Diphtheria carriers have been treated according to Page[1] by using vaccines of *Staphylococcus pyogenes aureus*. His patients made most satisfactory progress, the diphtheria bacilli disappearing from the throats in from forty-eight to seventy-two hours. He used pure cultures of *Staphylococcus aureus*. Catlin, Scott and Day[2] have employed the same method and report satisfactory results in eight cases. In view of the few reported cases one would hesitate to recommend this method. A plan of treatment for ridding throats of diphtheria bacilli along these lines is much to be desired.

Measles.—I have seen measles spread like wildfire through an infants' ward causing disaster which was deplorable. And chicken-pox once gaining access to an infants' hospital seems to spare none save those who have been protected previously by the occurrence of the disease. Strangely enough, I have seldom seen extensive epidemics of scarlet fever or whooping-cough in children's hospitals, though these patients are occasionally admitted into the wards before they are positively identified. Possibly my own experience has been more fortunate than that of others, but I have rarely seen widespread epidemics of these diseases in hospitals; not so of orphan asylums and infant asylums where I have frequently observed scarlet fever and whooping-cough gain a firm foothold.

The so-called grip infection, especially in infants' wards, is not infrequently disastrous. Possibly a nurse is suffering from an acute cold, or from a severe nasopharyngeal infection. In another day or two an infant has a similar affection and before long several of the infants, or indeed all of the occupants of the ward, are coughing and sneezing, and showing injected conjunctivas and red throats or swollen tonsils and elevation of temperature. In a few days some of these infants show laryngeal involvement, and some develop bronchopneumonia. The mortality from this epidemic disease is considerable, and I have seen almost an entire ward devastated by grip epidemic.

Epidemics of pneumonia, other than of the grippal variety, have been reported; and wide-spread dysenteric affections are of occasional occurrence.

Syphilis from congenital syphilitics is sometimes communicated to infants who have not been previously affected. Cassel of Berlin has informed me verbally of some of his own experiences with this form of transmission. He has recently published[3] a report on "The Dangers of Syphilitic Infection in Modern Infants' Hospitals." He cites several cases and points out the menace of admitting these children into general wards.

1. Page, Henry: Arch. Int. Med., 1911, vii, 16.
2. Catlin, S. R., Scott, L. O., and Day, D. W.: THE JOURNAL A. M. A., Oct. 28, 1911, p. 1452.
3. Cassell: The Dangers of Syphilitic Infection in Modern Infants' Hospitals, Arch. f. Kinderh.

In the light of modern investigation one would think it necessary to isolate patients with cerebrospinal meningitis, as well as those with acute poliomyelitis. I do not know of a single instance in which these diseases have been transmitted to other patients in hospital wards. This does not hold true of typhoid, and certainly not of cases of open tuberculosis. With these latter diseases evidence of transmission is too well authenticated to require further comment.

Pyocyaneus and other pus infections occur in infant wards as in general surgical wards, and are difficult to control.

PROPHYLAXIS

The exclusion of epidemic contagious diseases and infections from children's hospitals depends on an accurate knowledge of the sources of the diseases and the avenues of their introduction, together with a most painstaking technic for their prevention. This technic is difficult of execution. In many of our hospitals and institutions with rotating services, with a somewhat half-hearted interest of attending men, and with an inefficient supervision or directorship, definite or stable rules of administration are difficult to carry out.

A children's or infants' hospital, almost more than any other institution, requires well-thought-out, unvarying rules of administration. The technic for the prevention of infection and cross-infection should be stringent and invariable, the cleanliness and general asepsis as perfect as that of the surgical operating-room. It is evident that the first essential in the proper conduct of an infants' or children's hospital or ward is a matter of efficient administration. Attending physicians, interns, nurses and all others who have access to this department should cooperate in the plan of prevention as it has been worked out. Having proceeded thus far it is all important that one or more of the hospital officials or attending staff should have authority conferred to enforce the rules of technic which have been agreed on, because it is common experience that, unless there is centralized authority or supervision, lapses occur to the detriment of efficient administration. With the frequent changes in nurses and interns the watchword from those in charge to those who are subordinate should be eternal vigilance.

Many of the lapses which occur may be charged to the carelessness not only of the interns and nurses, but also to attending men. The latter are frequently thoughtless, or even careless as they pass from one patient to another.

I have frequently thought that much of the transmission of disease occurs during the night Night nurses are nearly always overworked; often they take care of three or four times as many patients as would be required of them during the day. They rush from one child to another without precaution of disinfection, or even of cleansing their hands. Bed-pans and thermometers are used indiscriminately from one patient to another, and often there is no supervisor in the form of head nurse or senior ward nurse. Though the young night nurse does the best she can, errors in her technic are liable to occur, owing to the circumstances under which she is laboring.

HOSPITAL CONSTRUCTION AS AN AID IN PROPHYLAXIS

The building in which the children are to be housed should be kept absolutely clean, and should admit of the most thorough ventilation. Every form of overcrowding should be avoided. The floors should be perfectly smooth, easily cleaned and devoid of cracks and holes, which accumulate dust and germs. As in all modern hospitals, there should be no angular corners, and the walls should be easily cleansed and not contain pictures, unnecessary moldings, or memorial tablets. If the wards are small the number of children who are exposed to contagion is necessarily reduced. An observation station consisting of small individual rooms or cubicles should be provided for, so that the newly admitted patients may be kept under observation for a number of days, or in some cases for two weeks, until the possibility of introducing infection has been excluded. Numerous small rooms should be provided in connection with the general wards so that infants who develop skin eruptions, grippal affections or other infectious or suspicious processes may be removed at once from the ward to more or less complete isolation. It should be possible to isolate one ward from another; for example, if an infectious process has occurred in one ward it would be expedient to close this ward to the admission of new patients and to prevent nurses and interns engaged in such an infected ward from mingling with other patients as well as other nurses and interns.

CLINICAL AND BACTERIOLOGIC EXAMINATIONS OF PATIENTS ON ADMISSION

There is some difference of opinion as to the value of making throat cultures and bacteriologic examination of the vulvovaginal region on the admission of the patient. It is a precautionary method which can do no harm, and while undoubtedly it occasionally fails to reveal the presence of either diphtheria or a gonorrhea, nevertheless it frequently assists in the detection of one of these diseases before harm has been done. We have adopted this plan for many years past and it has frequently aided us in discovering a communicable disease. It is almost needless to say that the child should be completely undressed, should be carefully examined for skin lesions and the presence of congenital syphilis, and that the mouth should be examined for Koplik's spots. Acute or open tuberculosis should be investigated by careful physical examination. A history should be obtained as to whether the patient had been exposed directly to any contagious disease before admission, and note should be taken of any contagious disease from which the patient had previously suffered. He should be examined and then sent to the observation station. The observation station should be so arranged that in most instances only one patient is assigned to a single room. The room should admit of careful isolation and should contain running water and facilities for heating food or bottles on a gas stove or an electric plate, and for bathing the patient in the room. It should be the routine practice that every attendant who comes into this room should don a fresh cap and gown on entering; he should wash his hands carefully before handling the patient and should remove the cap and gown on leaving the room. This should apply to attending men, interns, nurses and, if possible, visitors.

PROBLEMS IN INDIVIDUAL PROPHYLAXIS

In a given case it is difficult to know exactly how an infant has become infected, or in what manner an epidemic has been started. Possibly the utensils which the patient needs in his care and treatment, possibly the linen or the hands of nurses have done the mischief, or interns may have spread the infection. In order to obviate the possibility of diffusing infections through a hospital the following points should be borne in mind:

Each patient should have his own thermometer, bed-pan, dusting-powder box, basins, wash-cloth, towel, and his own bath tub. The linens, clothing and napkins should already have been boiled and laundered. The

patient should be dressed and undressed on his own bed, not on a table in general use. The scales in which he is weighed should be covered with a paper napkin or a sheet of paper which should then be destroyed; or the scales should be covered with a diaper which will subsequently be used on the patient. The nurse should wash her hands frequently, particularly as she passes from patient to patient. There can be no doubt that the infection is frequently carried on the hands of those who handle the child. The same rules should apply to interns, attending physicians, nursery maids and in fact, every one who treats the children. Simple as these rules seem, they are difficult to carry out. I recently suggested during a period of stress from a diphtheria infection that the nursery maid and nurses should wear rubber gloves which should be changed as they passed from one patient to another. It is obvious that such a rule would be expensive in time and in money if it were to become a permanent law.

It is evident that a children's hospital, or institution, presents difficulties which require the utmost thought and the most careful precautions. It is absolutely impossible that infections or infectious diseases can always be detected on admission of the patient, so that mild epidemics will occasionally occur. It is, however, possible by employing the most stringent methods, to prevent wide-spread epidemics if the organization works in complete harmony, living up to the most accepted views of prevention and general hygiene. In order to accomplish this the medical and nursing staffs must be awake to the necessity of all that pertains to prophylaxis, and must give most careful attention to all the minor details which, taken into the aggregate, contribute a technic of prevention and will solve many of the difficulties of administration.

The hospital should be properly constructed and provided adequately for quarantine and isolation. The spirit of thoroughness, helpfulness, enthusiasm in the work and a zeal to prevent the epidemics which we have referred to should pervade every one in the institution from the highest to the lowest.

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ABSTRACT OF DISCUSSION

DR. J. O. SKINNER, Washington, D. C.: Do the Chicago health laws require cases of spinal meningitis to be isolated? Dr. Abt said that these cases do not have to be quarantined.

DR. J. A. HORNSBY, Chicago: Our laws are peculiar. Several years ago on looking into the laws I found that I would have to go to jail whichever way I interpreted them. A child with diphtheria came to our admission room. The law forbade receiving the child but also provided that communicable diseases must not be sent anywhere in a public conveyance. There was no private conveyance to which we had access, the health department had no ambulance available, but the child could not be kept in the admission room because it was dying. We gave it antitoxin and took care of it as best we could. The law prescribes that cases of cerebrospinal meningitis shall be isolated but we never isolate spinal meningitis or typhoid fever cases. Chicago prescribes a lot of things but has no means for their enforcement.

DR. J. O. SKINNER, Washington, D. C.: Dr. Abt does not consider the segregation of cerebrospinal meningitis in children necessary. I thought it necessary that these cases should be isolated and rooms fumigated, etc. One winter a nurse from Schenectady, where there was a cerebrospinal meningitis epidemic, came to Washington, and four months later she developed the disease. As there was only one other case in Washington, a tuberculous spinal meningitis, the nurse evidently brought the infection. The period of incubation is not known. If Dr. Abt does not consider the isolation of these cases necessary, it is important for us to know. We have always regarded them as highly contagious and infectious. In this case we fumigated the rooms, clothing, etc., and that was the only case that occurred.

DR. J. A. HORNSBY, Chicago: We make no attempt to isolate cases of cerebrospinal meningitis or typhoid fever.

OUT-PATIENT WORK

THE MOST IMPORTANT AND MOST NEGLECTED PART OF MEDICAL SERVICE *

RICHARD C. CABOT, M.D.
BOSTON

If a patient in a hospital ward should have pneumonia you would not think of filling up the other beds in that ward with members of the patient's family who may be going to come down with pneumonia. But when one phthisical patient applies for treatment at any up-to-date dispensary it is obviously the duty of the dispensary to send for the rest of the family exposed to infection and have them examined, and, if need be, treated. One case of rickets is the symptom of more rickets in that family, present or to come — the single rachitic seen at the dispensary is but a single symptom of the rachitic forces at home. Physicians never like to treat symptoms; they want to get down to the roots of things. One case of lead-poisoning means more cases in that shop; one case of vulvovaginitis means a nest of them in the neighborhood.

THE FIELD OF THE DISPENSARY

Out-patient work naturally leads us to follow up disease to its lair in the spirit of modern preventive medicine. Ward work deals mostly with isolated cases after the disease is in full swing. It cannot be radical, fundamental, preventive, like dispensary work.

Again, in ward work we can seldom deal with the incipient stage of disease. The patients are not sick enough to occupy a bed. But it is just in the incipient stages that phthisis, stomach trouble, malnutrition, exophthalmic goiter, lead-poisoning can be more successfully treated. The community profits far more by this bud-nipping treatment in dispensaries than by the palliation of advanced disease in hospital wards.

The dispensary has another advantage over the wards in the management of chronic cases. Patients with these troubles are better for being kept at work and in their homes. They get hospitalized and flabby in the wards. Yet they may need guidance and advice from time to time over a period of many years and this they can best get in a dispensary.

The dispensary, then, hits the problem of disease at three most vital points where the wards cannot: 1. It roots out foci of disease in families or neighborhoods, following home the clues presented in the person of the dispensary patient and so preventing disease. 2. It checks disease in its incipiency. 3. It deals with chronic cases and keeps the patients from relapsing into a discouraged and vegetative existence.

THE SLOVENLINESS OF DISPENSARIES

Yet in spite of these three distinguishing marks of superiority, and in spite of the fact that almost all hospitals treat five times as many persons in their dis-

* Read in the Symposium on Relations of the Hospital to the Public in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

pensaries as in their wards, we still allow the tradition of superficial, slovenly work in dispensaries to go on. We allow the great dispensary abuse — not the abuse of the dispensaries by the patient, but the abuse of the patient by the dispensary — to go on. We allow snap diagnoses, treatments that will not bear scrutiny, and records that are a farce. We are content that hospitals should spend at least twenty times as much for the care of a ward patient as they do for the care of a dispensary patient.

From the point of view of public service and public health this is all wrong. Some day the magazines will find us out and make a scandal of the slovenliness of our dispensaries. We ought to make haste and reform ourselves from within before the storm of public disapproval breaks over our heads.

MORE SCIENCE AND MORE CHRISTIANITY NEEDED

The remedies are two: more science and more Christianity. Scientific management, efficiency tests, have just begun to permeate our dispensaries, thanks to the splendid work of Michael Davis at the Boston Dispensary. We treat many cases of scabies, of varicose ulcer, of constipation, of hemorrhoids, of chorea, but what dispensary has adopted a system and followed up its results enough to know whether the time and money which has been spent in these cases has been wasted or not? Not one that I know of except the Boston Dispensary.

Some clinics are efficient, especially those in which treatment can be administered and finished at once. If you sew up a cut or inject a dose of mercury or fit a flat-foot plate, you may be able to finish the work then and there. It is the medical, neurologic, pediatric and skin clinics that are relatively slipshod.

Hurry, crowding and too few assistants prevent creditable work in many instances. There should be in each clinic a fixed ratio of space, staff and outfit to the number of patients received, as there is in a ward. There is no sense in allowing dispensary work to be a hurried and desperate struggle against time and numbers.

It is possible to do as accurate scientific work in diagnosis and treatment at a dispensary as at a private office. It means honest, conscientious, efficient, well-organized, well-supervised work, with the interest of the patient rather than that of the physician or the student always paramount.

In like measure do we need the Christian spirit to make our treatment effective. We no longer administer our drugs with adjuvants to strengthen them, with demulcents to soften their harshness, and correctives to modify their one-sided action. All the more literally and practically, therefore, we need for efficient treatment a fund of patience, of cheerfulness, of readiness to be interested in each least promising and most unattractive individual in the clinic, that in my experience comes best out of the spirit of Christianity. Individuals must cooperate with us if we are to help their stomachs, their tuberculous lungs, their chronic joint troubles. The patients need heroism often if they are to overcome their troubles. They will not get it out of drugs or physical therapeutics. They must get it from their physicians. A physician who goes stale when he comes to treatment is nearly useless, and we all go stale without Christianity.

190 Marlboro Street.

THE EFFICIENCY OF OUT-PATIENT WORK *

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According to the census of 1910 the three cities of New York, Chicago and Boston have a combined population of 7,622,751. It was recently estimated that 45 per cent. of the people in Chicago were receiving dispensary aid; in Boston and New York the estimates indicate that the proportion is not less than one-third. In these three cities the out-patient departments and reputable dispensaries are providing medical service for fully 2,500,000 people and are expending annually at least $1,500,000. In the country as a whole, in the treatment of patients, millions of dollars are thus spent. Has $100 been spent in studying the results of the treatment, in testing methods, and in framing standards by which to estimate achievements in relation to expense?

OUT-PATIENT EFFICIENCY TESTS

The general method of an efficiency test is to investigate work done in relation to effort expended; or, in other words, to compare results with cost. In the case of an out-patient department this means selecting a group of patients according to any method that does not involve bias, and seeing what happens to these patients as the outcome of their visits to the clinics. While from our point of view the results achieved are primarily medical, we should also regard social results if we are to judge out-patient efficiency aright. In reference to an individual patient this means that he is not to be considered merely as a disease; that is, as a heart, a liver, or a broken leg, as he sometimes is to a specialist. He must be looked on as a human being, a member of society, and our results are to be judged by the improvement which we produce in his health, working efficiency, or I may say more broadly, his living efficiency as a member of a family.

THE STATISTICAL METHOD

Of two methods here proposed for these studies of efficiency, one, the simpler and the less intensive, is solely statistical. This method proceeds on the assumption that the efficiency of out-patient work bears a relation to the number of visits which a patient suffering from a known disease makes to the clinic In other words, successful treatment under given clinical conditions would normally require a certain number of visits for each disease; it might be one, it might be twenty; it would vary with the diagnosis. Of course there would also be differences between patients, but if we use sufficiently large numbers to reduce the influence of individual peculiarities, we render it possible to average our figures and secure results of considerable interest.

Tests by this method will indicate both absolute and relative efficiency. That is, they will enable us ultimately to set certain standards to which a clinic devoted to certain diseases should conform if it is to do good work. These tests also enable us to compare different clinical methods or the services of different physicians and estimate their relative efficiency.

To illustrate: In a genito-urinary clinic the records of the new cases of gonorrhea were tabulated for six months, the tabulation being made after the six months were over so that nothing was known about the test dur-

* Read in the Symposium on the Relations of the Hospital to the Physician in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

ing the progress of the work. The number of visits paid by each patient, as shown by the records, which in this clinic are kept by a paid clerk, are given in Table 1. The total number of patients was 450, nearly all of whom had acute gonorrhea.

It will doubtless be agreed that small results can be obtained in a patient with active gonorrhea from a single visit to the clinic, and that if nearly one-half of these 450 patients paid one visit and never came back, there is a serious waste of the physician's time and of the institution's money.

These figures are particularly interesting because in 1902 two of the surgeons then in charge of this same clinic made for a different purpose a study of the treatments for a period of two months,[1] and of 130 patients with acute gonorrhea found that eighty, or 61.5 per cent., paid only one or two visits. This is almost identical with 63.3, the percentage obtained by this study made ten years later. I shall touch later on some probable causes and correctives for this waste. Certainly we should have similar figures from a number of genito-urinary clinics and try every possible method to see if the proportion of wasted effort cannot be diminished. The growing demand for dealing effectively with the problem of venereal disease renders the efficiency of genito-urinary clinics a matter of public importance. They need to be efficient as curative and prophylactic agents, and as safe and sane substitutes for the advertising quack.

TABLE 1.—NUMBER OF VISITS TO A CLINIC BY FOUR HUNDRED AND FIFTY GONORRHEA PATIENTS

No. of Visits	No. of Patients		Percentage	
1	215		47.8	
2	70	285	15.6	63.4
3	32		7.1	
4	32		7.1	
5	16	80	3.6	17.8
6 to 8	29		6.4	
9 to 12	18		4.0	
Over 12	38	85	8.4	18.8

Another illustration exemplifies the value of the statistical test in judging relative efficiency. In a clinic for diseases of the eye, two quarterly services were compared and the number of visits per patient tabulated, similarly, for the two services. Without going into all the details, I will summarize the tabulation as follows:

In iritis cases the average number of visits during one service was 5.8, in the other service 10.6.

In cases of phlyctenular keratitis the average number of visits during one service was 4.7, during the other service 8.5.

In 473 cases representing six of the acute eye diseases including those just named (the cases being almost equally divided between the two services), the average number of visits paid per patient during one service was 2.4, during the other service 4.0. When each of the six diseases is tabulated separately the comparison makes in every case in favor of one service and against the other, the difference ranging from 25 per cent. to over 100 per cent. in the average number of visits paid per patient.

During one service (to illustrate further) 50 per cent. of the patients with iritis paid no more than two or three visits; during the other service 80 per cent. paid more than six visits. We may question whether successful treatment of an acute case of iritis can be given in two or three visits; we may be sure that twice that number of treatments is not too much to insure control of the disease and saving of the eyesight. The figures I have given do not determine the responsibility for the difference in efficiency, but they do raise the question pointedly.

Similar tests, carried out more completely, should enable us to set standards of out-patient treatment for different diseases. Every disease must be tabulated separately because each presents a special medical problem. To secure successful treatment we shall find necessary a minimum average number of visits to the clinic. With the cooperation of a physician in charge of a large children's out-patient clinic, I am now pursuing a series of studies along this line with a view to ascertaining approximately the number of visits and the amount of time that needs to be spent on the average patient in that clinic to secure good results. These standards will, of course, vary with the diagnosis. As we approximate toward our standards we can constantly be testing our methods of receiving, examining and following up patients to see whether we can thus improve our efficiency in treating a given type of case, or diminish the amount of time required to secure a given result. This standard will give us a check on our methods which is independent of any personal bias on the part of an investigator, and requires only that the record-keeping shall be reasonably accurate.

To summarize: The statistical method of studying the efficiency of an out-patient department is based on the number of visits paid per patient, classified according to diagnosis. It should yield judgments both of absolute and of relative efficiency; it should help us to find points of strength and of weakness, to establish standards of good work, and to test methods of improvement.

THE PERSONAL METHOD

The second method of making an efficiency test I may call the personal or intensive method. According to this plan we interview the patient in the clinic and at home, and obtain facts about his life, his family conditions, etc. We also study the medical records. We visit the patient at home after he has been treated in the clinic and thus have a complete history of the case showing three points: (1) the medical and the social problem which the patient brought with him at his first visit; (2) the diagnosis and treatment which he received; (3) the outcome of this treatment as judged by the clinical record itself and by home visits made after treatment had been given.

I will give a brief account of such a test recently conducted at the Boston Dispensary. It is essential that patients be selected at random or according to a method that does not allow the personal prejudice or interest of the investigator to have weight. To avoid this, we took for the test which I am about to describe all the new patients who came to the clinics on two arbitrarily selected days. The total number of new patients on these two days was 116. They were questioned at the dispensary in a tactful way by trained social workers.[2] Visits were paid to their homes, in some cases several visits, and the records of their clinical treatment were studied. Such a study yields an all-round picture of what the clinic does for each patient. It not only gives us figures showing the proportion of good and of poor or negative results, but it also fills out the statistics with life and color. By such a method we look behind the

1. Cotton, F. J., and O'Neil, R. F.: Boston Med. and Surg. Jour., 1903, cxlix, 538

2. The inquiry blanks, etc., used in this investigation will be gladly sent by the author to any physician or superintendent of a medical institution.

scenes and see what really happens on the out-patient stage. There are a number of vexed problems on which such an investigation sheds light. In the discussion of out-patient abuse for instance, we have floods of opinions, but what we really need are *facts* showing the actual relations of the out-patient department to the different social classes, and thus to the community as a whole. An investigation of this kind, presenting us with a cross-section of the work of an institution in its social as well as in its medical relations, is the method of providing us with such facts. I mention this to indicate my belief that this plan of investigation has value as more than simply an efficiency test.

The limits of this paper do not permit entering into these broad problems. As for the results of treatment, this efficiency test indicated, briefly, that about half of the work was successful and a third of it was dead waste. More exactly, 57 per cent. of the patients were cured, relieved or substantially improved as a result of coming to the clinics. Results were pending or indeterminable in 9 per cent. of the cases, while in 33.3 per cent. the treatment was entirely wasted, either because the patients paid only one visit without any definite result or because they ceased to return before treatment could possibly be completed.

The 33.3 per cent. waste effort is a minimum figure for the group of patients with which this investigation dealt. I do not, of course, regard such a figure as of general application but the percentage is perhaps not remarkably high. Should not similar tests be made often; in fact, be carried on regularly in every large out-patient department?

I might suggest that this same method could be applied to the discharged patients of hospitals. Should we not find it of value to know the proportion of patients who suffered relapse or who showed no really permanent benefit from the hospital care, either because they were discharged too soon or because the permanent causes of their illness lay in the conditions of their homes or of their daily work.

HOW TO IMPROVE OUT-PATIENT WORK

If we are to have tests of efficiency and if as a result we find a large percentage of medical waste, how shall we improve the service and reduce the waste? I believe that the general conditions of efficiency in out-patient service are five:

1. The skill and interest of physicians.
2. The technical equipment for medical and surgical work.
3. The character of the medical organization, arrangement of services with reference to the number of patients to be treated, and the general administrative system of the institution as a whole.
4. The extent to which the clinics are provided with an organized paid service, including nurses, social workers and clerks.
5. The extent to which the social problems of patients are dealt with in a definite way.

Each of these conditions of efficiency must be studied separately. In recent years much attention has been given to the first two conditions and a good deal to the third, while the fourth and fifth, particularly the fifth, have been in the main neglected.

Different institutions are trying interrupted and continuous services, small staffs and resident staffs according to various plans for out-patient work. Which systems give the best results, not only in medical or administrative convenience, but in the treatment of patients? Only impersonal efficiency tests can answer.

The circumstance that most diminishes the efficiency of an out-patient department is the failure of patients to return for treatment. "He never came back" is the common complaint. To meet this we must have a follow-up system. Improved records which tell automatically when patients should return are valuable aids here, but social workers with a medico-social training are still more helpful. Under the guidance of the physician they follow up the cases, assist in carrying out treatment and in seeing that patients come back to get treatment. To be of maximum service in this way the social worker must be regularly in the clinic instead of merely taking such patients as are specially referred to her. The latter has been the practice of most social service departments. Almost every case of tuberculosis, syphilis, anemia, and a long list of other diseases is a social problem as well as a medical, and neither problem can be solved without the other. The physician has, as a rule, neither the training nor the time to grapple with the conditions of poverty, industry and personality which lie behind a large proportion of the diseases of out-patients. Unless they are dealt with, however, neither patient nor physician can expect to get satisfactory results and there is a good reason why the patient does not come back.

But investment in the paid services of social workers and clerks, as tools of efficiency, is expensive. The extent to which it is worth while, even considering the expense, can be determined in one of two ways: (1) by using our preconceptions, and guessing; (2) by employing impersonal methods and making efficiency tests.

A system of social work, supplemented by some improvements in record-keeping which required a paid clerk to carry out, was recently established in a children's clinic treating an average of fifty patients a day. In three months this system resulted in raising the average number of visits of patients from 2.9 to 4.7 with very positive testimony from the medical men that they were getting more out of the clinic from the professional standpoint. What the patients got is another matter, but we may be sure they did not get less.

I regard the efficiency tests described in this article as merely a beginning and as experimental, and I present them not as indicating final results but to suggest methods by which out-patient departments may subject their own work, as they should, to continuous and impersonal self-criticism. Doubtless other and better methods will be devised. Surely such tests should be conducted not sporadically but as a matter of routine in large out-patient departments and hospitals generally, so that we shall be able to make comparisons and to establish standards which we lack to-day.

The growing public demand for more and better out-patient work cannot be met by institutions unless they raise large sums from private philanthropy or from municipalities. In going to charitable givers, to city councils or to legislatures for these increased funds we need to back our arguments with figures as well as hopes. Efficiency tests supply the rational basis on which out-patient departments may progressively develop themselves as more and more effective agencies of the public health.

ABSTRACT OF DISCUSSION

DR. MILNE B. SWIFT, Fall River, Mass.: In the surgical out-patient department of the Elizabeth Stevens Clinic of Union Hospital, in Fall River, we began about two years

ago to institute these efficiency tests of which Mr. Davis has spoken. We have developed a system of continuous efficiency tests, through which we are able to draw some very conclusive deductions as to the value of these tests to ourselves and to the patients.

We have a population of 120,000; one-fourth of these are operatives. Our out-patient work deals chiefly with accidents to this population. These accidents, though not serious to life, do greatly diminish the efficiency of the industry and because the manufacturers are interested in their employees, they contribute beds to the hospital, and insist that in return their injured shall be taken care of at the hospital. It was not until we instituted these efficiency tests that we were able to do thoroughly satisfactory work for ourselves, the patients and the industry. The treatment of the various classes of injuries has changed radically, and we find that the patients are getting better much quicker, and that the efficiency of the patients and the industry is increased. This we consider to be entirely due to the tests.

MISS M. E. MCCALMONT, Brooklyn: In occupational diseases, is not a concerted effort made to divert the patients to other occupations in dispensary cases?

DR. JOHN ALLAN HORNSBY, Chicago: I am afraid there is no one here who can answer that question. In Chicago we have two large bodies that do a great deal of work, the United Charities and the Jewish Charities. Our hospital is the Jewish Hospital; and we have something in the neighborhood of 60,000 patients from the ghetto district visiting the dispensary. We do make an effort to follow up people suffering from occupational diseases and to prevent them going back to disease-inducing occupations. We try to get them out of the lead and paint factories. The patients with incipient tuberculosis we send to our tuberculosis hospital until they are well and then we try to get them other occupation and divert them from their former occupations. I have nothing to do with this work except as head of a large hospital, which eventually gets these patients.

MISS M. E. MCCALMONT, Brooklyn: I became interested in the subject because of interest in the child-labor question. Children in getting their working papers should be definitely forbidden to go into occupations for which they are physically unfit, and it seems to me a very important phase of social work in both dispensary and hospital that patients about to be discharged should have specified to them the occupations in which it would be distinctly dangerous for them to engage.

THE RELATIONS OF THE HOSPITAL TO CORPORATIONS INTERESTED IN PATIENTS *

S. C. PLUMMER, M.D.
CHICAGO

Corporations may have no souls, but they have policies dictated by the individuals who control them. These policies, as far as they touch hospitals and the medical profession, reflect the attitude of the corporations toward their employees. Those corporations which regard the employee as a means of contributing to their profits and give no consideration to his deserts as an individual, which work him to the limit of endurance during his best years and throw him into the discard when, as a result of his hard work, his efficiency has diminished, will treat the hospital in a niggardly and unfair manner. On the other hand, those corporations which deal with their employees in a spirit of fairness will show a spirit of justice in their relations to the hospital. From the standpoint of the hospital, there are good corporations and bad ones.

The employing corporation is certainly under some moral obligation to the employee, and this obligation is much stronger than the obligation of the hospital to that employee, which latter is only the slight obligation which the hospital owes to that employee as a member of the community at large. Still many corporations deny all moral obligation to the injured employee, and cheerfully foist on the hospital and its attending staff the entire responsibility for the care of the patient, paying nothing unless forced by law to do so. The patient is, as a rule, absolutely unable to meet the expense, and litigation is trying and, in the main, unprofitable, so that the hospital and its staff members accept the imposition and assume the obligation which morally belongs to the employer.

The corporation which directly refuses to meet its obligation to its injured employee by paying his hospital expenses is no worse than the corporation which virtuously refers the hospital management to the liability company in which it is insured. These liability companies make money by making the cheapest settlements possible; they have no direct obligation to the employee, such as the employer has, and every hospital bill they can avoid paying is clear gain. Occasionally they may agree to pay ward rates to the hospital, but when the staff surgeon presents his bill, he is informed that to them he is an unknown person.

It must be said for the ungenerous corporation and the liability company that legally they are not responsible to the employee in the great majority of cases, the common law giving them the defenses of assumed risk, contributory negligence and the negligence of fellow-servants. Morally, the present tendency of public opinion is to hold them responsible.

A somewhat higher moral development is shown by the corporation which, while expecting to have its employees receive hospital care without directly compensating the hospital, makes an annual contribution to the hospital in the form of a gift. Although such a corporation gets credit for being philanthropic, the gift is really a most excellent investment from a business standpoint, as in return for the gift the corporation receives in hospital care and surgical attention many times the value of the amount expended. The staff surgeon does not render a bill, for, having the interests of the hospital at heart, he does not wish to estrange the institution's philanthropic supporter.

On a par with the last type of corporation, or a little above it, is the one which regularly pays ward rates, but no surgical fees.

I now come to speak with pleasure of the exceptional corporation which treats both the hospital and the surgeon with the consideration due them. Waiving the question of legal liability, such a corporation assumes the expense of surgical care of all its employees injured in discharge of duty. Such a corporation is guided by high ideals as to its moral obligations, and at the same time finds that such a rule of conduct puts it on better terms with its employees, and is on that account good business policy. It is my good fortune to be associated with a corporation of this class. Injured employees are treated as individuals worthy of consideration, settlements are made with them on a just basis, and hospital and surgeons' bills are settled as a matter of routine. Such corporations may have their own surgeons and may stipulate that they will pay only for services rendered by their regularly appointed surgeons, but they never make their employees objects of charity.

* Read in the Symposium on Relations of the Hospital to the Public in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912

No corporation ought to shift on the hospital the expense of caring for its injured employees, and the hospital management should see to it that they do not do so. The attending surgeon should not be forced, by reason of his position, to treat as charity cases the patients of a prosperous corporation. The practice in the past has been for the struggling hospital and the only moderately prosperous attending staff to furnish the great bulk of the charity, while the corporation, often a very rich one, contributed nothing or at most a disproportionately small share A more equitable distribution among the three interested parties should be insisted on.

This declaration is not in advance of the public opinon of the day, as shown by the fact that in a number of states laws have been passed requiring employers to pay a certain amount of hospital and surgical fees on account of injured employees, and depriving the employer of the common-law defenses of assumed risk, negligence of fellow-servant and, as far as hospital and surgeons' fees are concerned, of contributory negligence. The national Senate has passed a bill of similar provisions to apply to employees engaged in interstate commerce, and this will undoubtedly become a law. These laws will educate employers as to the equity of the situation, and also provide against shifting the responsibility on a liability company, except by making such company assume all the obligations which the law requires of the employer.

The hospitals, in their turn, ought to assist the corporations by keeping their case records fully written up. This is especially true in states where employers' liability laws are in force, and in dealing with interstate employees, if the bill passed by the national Senate becomes a law. Interns do not realize how every point bearing on an injury should be noted in a case which is to come to adjudication. In the case of several injuries, the minor ones should not be overlooked in the records. Too often the intern is busy with other things and puts off writing up his cases, or does this in an incomplete manner. Where liability laws are in force these accurate records are equally as important to the employee as to the corporation employing him. The hospital should also see to it that at the time of discharge from the hospital a complete and accurate statement is made of the patient's condition. The perfunctory statement that he is "improved" or "cured" will not suffice.

As to the visits of claim agents or other representatives of the corporation, I shall leave it to my legal confrère to tell you as to their permissibility under the law, but I shall state my observation as far as it relates to the corporation with which I am associated. I find that the injured employee is glad to see the representative of the claim department and takes his visit as evidence that the company is interested in him. As the claim department never takes advantage of the injured employee's predicament, and does not attempt to negotiate a settlement until he is on the road to recovery, I can see no impropriety in these visits. If a corporation not accustomed to fair dealing were concerned, it would be a different matter.

What of the visits of the personal-injury lawyers? Let me quote from a recently published interview with President Taft, in which he states the benefit to be derived from the proposed national workmen's compensation law:

> **Under the common-law principle now prevailing in this country, employees frequently recover from the railroads large verdicts for damages, but after counsel fees are paid, experts compensated and other costs deducted, the beneficiary does not receive on an average over 50 per cent. of his compensation. The payment of the judgment is often long delayed through appeals to the courts, and the employee finds himself in hard straits and his family suffering.**

Any one who has been in position to observe the outcome of cases which have fallen into the hands of the personal-injury lawyer can confirm the President's declaration. Moreover, these lawyers have frequently been known to inveigle an injured man to sign a contract to pay them a large percentage, usually one-half, of what he recovers, when his condition is such that the claim agent of a self-respecting corporation would be ashamed to broach the subject of settlement. Again, I do not know the law governing such visits, but from a moral standpoint I ask, Ought not the hospital authorities to forbid the visits of these self-seeking individuals?

As to allowing representatives of corporations to consult the hospital records of injured employees to assist in effecting a settlement or defending a suit for damages, it seems to me that no man's just rights are in any way trespassed on in bringing out the truth, and I assume that the hospital records contain nothing but the truth, as I cannot imagine any hospital management allowing its case records to be falsified in the interest of either employee or employer. In my opinion, both the corporation's representatives and those of the patient should have access to the records.

As to the use of the records by a patient for the purpose of bringing suit for malpractice, we know that the majority of such actions are brought through mercenary motives or through ignorance, and have no just foundation, as is evidenced by the fact that many such suits are brought against the ablest practitioners; consequently, the person bringing the suit deserves no assistance or encouragement. I do not believe, however, that the contents of the hospital record would assist his cause.

All well-managed hospitals try to prevent grossly incompetent or morally unfit practitioners from attending cases under their roofs. Occasionally one of these slips in undiscovered, and when this occurs I cannot see how the hospital owes him any protection.

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THE LEGAL ASPECTS OF THE RELATIONS OF HOSPITALS TO CORPORATIONS INTERESTED IN PATIENTS *

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It has often been said that no two doctors can diagnose a case alike, and probably the same thing is true of lawyers. I have even heard it said that no one lawyer can state the law alike twice. Consequently, in a twenty-minute endeavor to discuss the above subject, I shall confine myself to a few general propositions.

When some poor unfortunate is struck by a street-car, or steps in front of an automobile, or stumbles on a loose board on a factory floor, and the victim is brought to your hospital for six weeks' stay, some interesting problems not altogether medical are likely to develop.

* Read in the Symposium on Relations of the Hospital to the Public in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

Unless your hospital is a public one, that is, maintained by the state, county or city, the injured man has no legal right to demand admittance. Your hospital does not turn him away, however, and having admitted him, you must treat him to the best of your ability, and cannot discharge him until he is able to leave without danger to himself. Toward the end of his stay the street-car company, or the casualty company in which his employer was insured, disclaims liability for the treatment, and you find that the injured man has no money, cannot pay his hospital bills, and probably for months to come will be unable to earn even a living. At the same time he wants to consult your records in a suit he intends to bring on account of his injuries, and forbids you to disclose information concerning his case. On the other hand, the casualty company or the employer wants your records and asks you for information to enable it to defend the suit, and sends its adjusters to visit the patient and perhaps talk settlement. Occasionally a lawyer calls on the patient to get him to sign a contract for prosecution of the suit. As proprietor of the hospital, what are your rights and your obligations to each of the parties involved in this interesting state of affairs? I use the words "duty" and "obligation" purely in a legal sense.

1. THE DUTY OF THE HOSPITAL TO THE PATIENT

If the hospital is a charitable one, that is, one not operated for profit or private gain, direct or indirect, its sole duty to the patient, with respect to the treatment furnished, is to use reasonable care in the selection of the physicians and surgeons, the nurses and employees whom it assigns to treat and attend the patient. In other words, when the hospital is a charity, it is not liable for the negligence of its staff and employees when it has used reasonable care in their selection. I cannot give you a better statement of the law on this subject than the words of the supreme judicial court of Massachusetts in a case brought by a patient of the Massachusetts General Hospital (a state institution, maintained in part by private donations) to recover for negligent treatment:

> The liability of the defendant corporation can extend no further than this; if there has been no neglect on the part of those who administer the trust and control its management, and if due care has been used by them in the selection of their inferior agents, even if injury has occurred by the negligence of such agents, it cannot be made responsible. The funds instructed to it are not to be diminished by such casualties, if those immediately controlling them have done their whole duty in reference to those who have sought to obtain the benefit of them. There was no attempt to show that the trustees had in any respect failed in the performance of their duty. If they had made suitable regulations, had selected proper persons to fill the position of surgeons, then whether those persons neglected to perform their duty, or whether another person, as the house pupil, not selected for the office of surgeon, assumed without authority to act as such, and injury has thus resulted, the plaintiff has no remedy against the corporation.—McDonald v. Massachusetts General Hospital (1876), 120 Mass. 432.

And it makes no difference that the patient is a paying patient. The supreme court of Michigan has expressed the law in this way:

> The fact that patients who are able to pay are required to do so does not deprive the defendant of its eleemosynary character, nor permit a recovery for damages on account of the existence of contract relations. The amounts thus received are not for private gain, but contribute to the more effectual accomplishment of the purpose for which the charity was founded. The wrongdoer in a case of injury, but not the trust fund, must respond in damages. This proposition seems too clear to require argument or authority. It is not, however, inappropriate to remark that better facilities for the care, cure and treatment of the sick, both of the poor and of those who are able to pay, are secured by the establishment of hospitals like that of the defendant. These facilities are increased by the receipt of money from those who are able to pay in whole or in part for the benefits received. Several hospitals of this character exist in this state, founded by private munificence. Obviously they would not have been founded if their donors had known or even supposed, that their charitable purposes might be thwarted by the verdicts of juries for the negligent acts of those who must necessarily be employed in the execution of the charity.—Downs v. Harper Hospital (1894), 101 Mich. 555; 60 N. W. 42; 25 L. R. A. 602.

When the hospital is operated for profit, it, like any other business enterprise, is responsible for the negligence of its employees, and must answer in damages for all injuries caused thereby. It assumes such liability, however, only in respect to those things which it contracts to furnish. If it undertakes to furnish medical or surgical attention it must do so; but it owes the patient a legal duty only by virtue of its contract. The duty or the absence of duty on the part of the hospital has no bearing on the liability of the physician or surgeon to the patient whom he undertakes to treat. The doctor always is under a legal obligation to the patient, and must pay for his mistakes.

The foregoing principles have been applied to the hospital or relief departments of railway and other companies. When such a department is supported by voluntary contributions from the employees and the company, and is not conducted for profit, it is held to be a charity, and the company's only duty is to use reasonable care in the selection of the physicians and surgeons who conduct it; whereas, if it is conducted for profit, the courts hold that it is a mere department of the company concerned.

With respect to the inspection of its records, the hospital owes no *legal* duty to the patient. The records are the property of the hospital; and while professional ethics might suggest it as a proper course, yet a refusal to permit a patient to inspect the records of the hospital certainly would not deprive the patient of any legal right, or violate any legal duty on the part of the hospital. I shall mention later the use of these records in litigation.

II. THE INTEREST OF CORPORATIONS IN PATIENTS

The word "corporation" is used in the title of this paper primarily because most of those who have an "interest" in patients in hospitals are corporations; but there is no difference in principle between a corporation and an automobile owner whose car strikes an absent-minded pedestrian. Apart from the ordinary sympathy for the injured, the "interest" referred to is merely interest in the possibility that the victim of the accident may collect a judgment for damages. Every accident carries this possibility, and the large corporation is most frequently mentioned in this connection because its manifold activities make the sum-total of its accidents a matter of great moment. We speak, therefore, of corporations.

In a strict legal sense, the large company whose employee is injured, or the street-car company whose car injures a passenger or a pedestrian, owes absolutely no duty to the injured one in the way of medical treatment or attention. Common humanity may require first aid

to the injured, but the law does not make a legal obligation of it. The hospital may not look to the corporation for payment, but to the patient. If the injury occurs through negligence the law gives the patient an action for damages, but does not require the party at fault to see to it that a physician is called, or that the victim is sent to a hospital. In case damages are recovered for the injury, one element of the damages is the amount expended by the patient for medical treatment and attention; and the hospital by legal action may see that its bills are paid out of the judgment, but has no right to sue the corporation for them.

Many large companies have gone beyond their bare legal necessities, however, and established hospital and relief departments. In some cases a deduction is made from the pay of the employee for the purpose of the hospital fund, or for the payment of sick benefits. In some cases the company contributes, in others not. Whether or not the company under such circumstances is bound to furnish medical and surgical attention to an injured employee depends on the terms of the arrangement by which the relief department is supported. The tendency of the courts is more and more to regard the relief department as an agency of the company, and to hold the company liable not only for the expenses of the treatment, but for the negligence of the physicians and surgeons employed in the treatment. The workmen's compensation acts recently enacted in various states also require the employer to furnish necessary medical attention, medicines and hospital services either for a fixed period after the injury, usually two weeks, or to any amount not exceeding a fixed sum, such as $200. In some cases the required treatment for which the employer is liable is limited both in time and the amount.

III. RELATIONS BETWEEN THE COMPANY AND THE HOSPITAL

From Dr. Plummer's paper in this symposium, I take it that to the hospital the most interesting aspect of this relation is the question whether it will be paid by the company for the services rendered the patient. Here the strict interpretation of the law comes in, and it follows from the preceding section that the company or corporation interested, financially or otherwise, in the condition of a patient is not liable to the hospital for treatment given the patient unless it has contracted, expressly or by implication, to be responsible therefor. I say by implication, because in a state where a workmen's compensation act places on an employer the duty of providing medical and hospital services for an injured employee, the fact that the employer sends an employee to your hospital and permits you to treat him would raise an implied promise on the employer's part to pay for the treatment; but, in the absence of such an obligation, the fact that the employer sent an injured man to you for treatment would not alone create any obligation on his part. Indeed, in many cases in which agents of railway corporations have made express contracts with hospitals for the treatment of persons injured, the courts have refused to hold the company liable for surgical and hospital bills because of lack of authority in the agent to make such a contract. You may be interested in the reasoning of an early Kansas case, which held that the division superintendent of a railroad had no authority to employ a physician to treat passengers injured in a wreck where a train was blown from the track.

> Probably there are but few instances of injury to passengers riding on railroad trains where negligence or fault cannot be traced to the railroad company; but, in cases where there is no such negligence, no responsibility can attach to the company, and no recovery can be had for the injuries sustained. It does not insure the lives or health of those who take passage on its trains. The most that can be required is that it shall use the highest care in the conveyance of the passenger to his destination. There is no more obligation resting on the company to provide medical care and treatment for passengers unavoidably injured than for passengers who become sick during the journey over the road. In either case the full measure of the duty of the company is to carry the passenger, in the condition in which he may be found, to his destination. Beyond this the company has no interest in the passenger, and therefore has no such concern for his health and soundness that it has in its employees who may be injured while in its service. To furnish medical care and treatment for passengers in such cases would be a mere gratuity and the funds of the corporation cannot be thus dispensed by the division superintendent without authority from the board of directors. . . . Perhaps it is true that in certain emergencies the superintendents of railroads are authorized to provide medical and surgical care for injured passengers and to bind the railroad companies for the payment of such services, and it is probably well that such provision should be made; but in those cases it will not be difficult to show the authorization, or a recognized custom or usage, of the company to furnish medical attendance to passengers injured by inevitable accident. In the absence of testimony of express authority from the company, or of a custom or usage from which authority might be implied, the company cannot be bound by such contracts made by the superintendent or his subordinates. If the injury to the passengers resulted from the negligence of the carrier, other considerations would enter into the case which might warrant the implication of authority in the superintendent or some general agent of the company to provide medical attendance and entertainment for them; but, whatever might be the rule in that case, we are of the opinion that there is no such presumption of authority in the division superintendent where the passengers are injured through no fault of the company.—Union Pacific R. R. Co. v. Beatty (Kansas, 1886), 10 Pac. 845.

The tendency of the courts is to get away from these early cases and, regardless of the company's negligence, to hold it liable for services given at the request of whatever employee happens to be in charge at the scene of the accident, at least until the surgeon has had an opportunity to communicate with the officers of the company, after rendering emergency treatment, to obtain authority for further treatment. This authority may be implied from the failure of the company to disclaim responsibility after such a request.

While the foregoing is, I think, a fair statement of the law, good business management, which is not altogether undesirable in a hospital, would seem to me to require the hospital to take the position that when services are rendered to an injured person at the request of any agent of a corporation or company, the latter is responsible for all treatment given until the hospital has been notified to the contrary. In other words, you should assume that when a patient is sent to you the party sending him is responsible for your bills. You can compel the patient to pay for his own treatment if he has the means; but if he has not the means, you do not want to have the company disclaim responsibility too early.

While you cannot hold the company for your bills unless you have a contract with it, the law indirectly comes to your aid, and places in your hands a powerful and persuasive argument. I mean your hospital records.

As stated above, the hospital records are the property of the hospital, just as the physician's records are his own property. In most cases these records are of vastly more importance to the company defending a claim than

they are to the man who claims to have been injured. The plaintiff can go on the stand and make all sorts of extravagant claims as to his injuries, and the jury has a right to consider these statements. He is not even required to have his statements corroborated by his physicians — his neighbors and friends can testify as to his healthy appearance and vigor before the accident, and his generally poor condition afterward. This usually is enough to get a fair-sized verdict. The defendant, on the other hand, needs all the evidence possible, and your hospital records are vital to its case. In all of our states, so far as I have been able to ascertain (except in actions arising under the various workmen's compensation acts referred to above), the defendant has no way, in litigation between itself and one of your patients, to make you produce your hospital records before trial. In other words, the defendant cannot have the benefit of your records in advance of the trial unless you are willing to permit it.

The same thing is true in a number (about half) of our states with reference to the testimony of physicians and surgeons, by virtue of statutes making communications to a physician or surgeon privileged, and providing that no physician or surgeon shall testify thereto. This privilege usually extends only to such communications as are necessary to enable the physician to treat the patient, but in all states where it exists it effectually bars the defendant from putting medical testimony on the stand unless the plaintiff waives the privilege. It is one of the anomalies of our system of legal procedure that a plaintiff suing to recover for personal injuries can, if he desires, exclude from consideration the most valuable and, in most cases, the only trustworthy evidence as to the nature and extent of his injuries, but about half of our states permit it. An excellent feature of the workmen's compensation acts in states where the privilege exists is that they provide for the examination of the injured employee at stated intervals, and provision is made whereby the result of these examinations can be introduced in evidence.

The plaintiff may waive this privilege, either by an express contract (as in an application for life insurance or a contract for employment) or by introducing the physician's testimony as part of his own case. In New York he can waive it only expressly on the trial. In states where the privilege does not exist, and in cases in which the plaintiff waives it, the defendant may subpœna any physician or surgeon who has treated the plaintiff, and probably also may compel him to produce his record of the case; but the defendant has no means in advance of the trial of determining whether this can be done or not, and no defendant wants to go to trial in a personal-injury case without knowing pretty well what the testimony is going to be. It therefore is vital to the defendant to consult the physician's records, and, as there usually is no way he can force the physician to permit it, it ought to be quite a convincing argument on the subject of the payment of the hospital bills.

The privilege above referred to does not in any state, so far as I know, extend to hospital records, as distinguished from physician's records; but while in most cases the defendant can require these to be produced at the trial, he would not like to take the risk of doing so without a previous inspection of them.

On the other hand, the law does not forbid you, if you see fit, to disclose to the employer information concerning the injured employee, or to the railway company concerning the injured passenger. This would seem to be a matter of contract between the hospital and the corporation interested. Certainly no honest patient can have anything to fear from it; and the dishonest patient is not entitled to ask you to aid him in his trickery. This is true even though the patient declines to permit the corporation to pay his hospital bills, and forbids the hospital to disclose his record to the corporation. The patient may always introduce the testimony of the physician in court, and may compel the hospital to produce the record of his case; but if the hospital, by reason of a contract with the corporation or for any other reason, desires to disclose privately to the corporation (not in court) the record of any patient, the patient has no way to prevent. An effort to prevent would certainly cast doubt on the good faith of his claims of injury.

Except in litigation between the hospital and the patient, the patient cannot force you to permit him to consult your records of his case. In the event of a suit on account of his injuries, he usually can have the records produced in court, if necessary, but that is the extent of his power.

The question whether you will permit claim agents, adjusters or attorneys to consult the patient while he is in your hospital is one with which the law does not concern itself. Certainly it is your duty not to allow the patient to see anyone until his condition permits; but while he is convalescent and can talk to visitors, the question whom you shall admit is one within your exclusive province. So long as he is a patient in your hospital, his visitors will have to be subject to your control. If a lawyer wants to consult the patient with a view to taking his case against the corporation, or if the adjuster wants to talk settlement or get a statement about the case, the only legal question that need bother you is whether the patient is in fit condition to see the visitor.

In this connection I might say a word from the viewpoint of the company which is in any way interested in your patient. What the company wants is a full, complete and accurate report of the patient's injuries. In spite of the popular outcry about corporations, I know of two or three companies of substantial size whose desire it is to accord to every injured employee or other person for whose injuries it may be responsible a fair and speedy reparation, so far as money will compensate, for all the injuries sustained. A misleading or inaccurate hospital or surgical report is worse than none. An accurate one is a help both to the patient and to the corporation, as well as to the hospital. Although the interests of the patient and the corporation may conflict, when the hospital is conducted in such a manner that both parties have entire confidence in its management, it can offer a great aid to the corporation in the fair and just handling of its injury cases, and to the patient in seeing that he gets fair treatment from all parties who have dealings with him.

Room 1025 La Salle Street Station

ABSTRACT OF DISCUSSION

ON PAPERS OF DR. PLUMMER AND MR. BELL

MISS M. E. MCCALMONT, Brooklyn: A question came to my mind as to whether a hospital receiving state aid should not be allowed to present a bill to a corporation for services rendered its employees. For instance, a man injured in a factory or foundry was sent to a Philadelphia hospital with instructions that only first relief be given. It soon developed that antitetanus measures were indicated, and the necessary number of injections were given. The company was asked to reimburse the hospital for the mere cost of the treatments,

about $37. This the company refused to do. According to the laws of Pennsylvania, the hospital receiving that state aid could not force the collection of the bill.

MR. MCCLAIN, Philadelphia: The particular case to which Miss McCalmont refers was that of a young man who was hurt in a weaving-mill and was sent to the Samaritan Hospital. The superintendent of the establishment directed us first to give him certain treatment, and to do that we placed him in the semiprivate ward. The physician discovered that antitoxin serum was necessary. The superintendent of the factory could not be consulted, as it was Sunday, so we ordered the antitoxin; but the superintendent of the factory refused to make his company responsible for the expense incurred and as yet nothing has been decided.

DR. JOHN O. SKINNER: Washington. D. C.: The rulings of the courts vary with regard to hospital records and patients. In the District of Columbia a judge ruled that a record of our institution could be used as evidence, and our records were subpœnaed in a certain case. The point was made by the plaintiff's counsel that the hospital record was not an official record in a legal sense and was used by a visiting physician only as a memorandum and for his information. The court sustained this view. The corporation could not get access to it. It is a ruling in our hospital that no record is allowed to be inspected without written consent of the patient or the knowledge and consent of the attending surgeon in the case. I consider these records as sacred as if they were made in a physician's office. Now, Mr. Bell maintains that the plaintiff can in Chicago use the records and can have the records subpœnaed and used, whereas the defendant is excluded from them. But assuming that to be the ruling of the Chicago court, why could not the counsel for the defendant sue the hospital for damages and thus get the records before the court as the plaintiff? This would be a roundabout way of doing it; and, on the other hand, the judge might not allow it to be used after the record is produced.

MR. F. S. BUNN, Youngstown, Ohio: We had a very interesting case recently of this kind in the Youngstown Hospital. We had a case in which both tubes and ovaries were removed from a woman in September. The following July this woman was ejected from a street-car and she claimed this caused a miscarriage. I secured legal advice as to whether I could be forced to take the records in the case into court, as I had refused to do so (just as Dr. Skinner did) without the consent of the physician and patient. The attorney said I should take the records into court and leave it to the presiding judge as to whether I should answer when a question was put to me. He ruled that we had a right to introduce our records in the case, and we did, showing that the operation had been performed, and the case stopped right there.

Another point is that of admitting visitors to a patient. We have a hospital that treats, each year, from 1,400 to 1,500 corporation employees, for which the corporation pays. The objection has come up that we should exclude from the hospital at all times men who are in the habit of following patients there in order to get a suit against the company. Our legal advice in this respect has been that inasmuch as we publish a "visiting hour" to the public, we have no right to exclude from the hospital any one the patient wishes to see, provided his physical condition is such that he may receive visits.

DR. J. O. SKINNER, Washington, D. C.: In connection with a matter of this kind, if the physician attending the patient is available, why should not his testimony be taken before the hospital records are reached? It appears that the court will sustain his refusal, on the ground of "privileged communication," to give any information concerning the case. In other words, they want to get from the hospital records certain information and thus make the hospital divulge information which it obtained in confidence.

MR. F. S. BUNN, Youngstown, Ohio: Both the superintendent of the hospital and the surgeon were subpœnaed in that case. They admitted all the evidence of both the surgeon operating and the records.

DR. JOHN ALLAN HORNSBY: This is a large question, in which many interests are involved and much discretion has to be used. For instance, I was visited by a member of the City Attorney's Department of Chicago who wanted to see the record of a patient who was suing the city for personal injury. I declined to show the record or to allow the use of it without the order of the patient, on the ground that the patient had sacred rights in the hospital. The city counsel then said that he did not want to violate any of the ethical laws I had brought up, but asked me if our position would still be maintained if he could demonstrate to my satisfaction that this patient was attempting fraud. I said that if he could demonstrate that it would put an entirely different face on the matter, but that I would have to be the judge. He submitted evidence, showing that suit had been brought against four corporations within three years by the same patient, the allegations being the same in each case. I looked over the record and found he had been in the hospital twice before—once five years ago for a disease that had involved the limb which had been injured. A year after being in the hospital he brought suit against a street-car company for this accident and it was thrown out of court, but he kept bringing suit and finally he brought a suit against the city. That is only one phase of the case. We must settle each case separately and while we have a policy and stick to it always, the applicant for the record has a sacred right; and if I am in doubt I call on our attorney, or the good people of our board to decide for me.

DR. D. S. FAIRCHILD, Clinton, Iowa: The fundamental thing in this whole question is the character of the records made in the hospital. I have had the opportunity, in court and out of court, to examine the records of hospitals that have been produced. Most of these records are of little value because they are not very well kept. I believe that this is true not only of hospital records but of physicians' records. We have had to deal with corporation cases and all class of cases treated in hospitals, and where the work was recorded in a thoroughly scientific way, the records were of great value. Apparently it is often difficult to answer these questions as to the experience of hospital people because it does not appear that records were kept that would show what became of these patients and what the results of treatment were. I suppose that it is one of the purposes of this section to discuss and work out plans which shall overcome the difficulties that appear to arise from want of careful record-keeping of cases.

DR. SAMUEL C. PLUMMER, Chicago: What Dr. Fairchild has just said about care in keeping records complete is one of the most important propositions this section has before it. It is important to keep records in cases subject to employers' liability laws, because the compensation depends on the patient's condition. The interest of the corporation and the interest of the patient in the records should be equal, and the records should be complete so that they can arrive at an equitable certainty. As Mr. Bell says in his opening paragraph, in different localities different judges rule differently, and I am glad we have had some different decisions called to our attention.

Ventilation in Its Newer View.—It is disconcerting to learn that the old physiologic groundwork for a scientific system of ventilation has been seriously undermined; but such is the fact. One series of experiments, startling and bewildering, appears to demonstrate that the maintenance of the chemical purity of the air, which was the primary object of all efforts at ventilation in the past, is really of no consequence. Then one learns that one may no longer assume that the temperature of occupied rooms should be kept uniform; indeed, the preponderance of present opinion strongly opposes uniformity of temperature, and finds virtue in the natural day-and-night variation. And now the clinician clamors for means to treat each patient on his individual merits; he demands one atmospheric condition for the pneumonia patient who is in need of respiratory stimulation, and another for the nephritic whose poor circulation and cold extremities suggest a warm and comfortable room, in contradistinction to the cold air, preferably out-of-doors, in which the pneumonia patient thrives.—S. S. Goldwater: Notes on Hospital Planning, *The Brickbuilder.*

THE RELATIONS OF THE CIVIL HOSPITAL TO THE MILITARY ESTABLISHMENT IN TIME OF PEACE; IN TIME OF WAR *

CHARLES RICHARD, M.D.
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The policy of the people of the United States has always been opposed to the maintenance of a large standing army. Our isolated position at a comparatively great over-sea distance from other world powers, our aloofness from international politics prior to the war with Spain, and the faith of the people in our patriotism and national courage as military assets have contributed to the continuance of this policy. Our military establishment has consequently not expanded in the same ratio as our population, or kept pace with the evolution of our institutions.

The civil hospital is now no longer an establishment merely for the care of the sick and injured, but has become in addition a teaching institution with a staff of men eminent in their respective domains, who are actuated by the spirit of progress, and whose work and coordinated experiences are directed toward the betterment and happiness of the race. It is such an ideal that I have in mind in speaking of the civil hospital in this connection.

The land forces of the United States consist of the regular army and the militia of the several states when called into the service of the United States. As the organized militia is subject to national service only when necessary to execute the laws of the Union, suppress insurrection and repel invasions, the Regular Army constitutes the land forces in time of peace. The authorized strength of this force at present is approximately 87,000; the medical department organization of this force comprises the Medical Corps, with an authorized strength of 445 officers — there are at this date about thirty-five vacancies in the lowest grade — the Hospital Corps, with an authorized enlisted strength of 3,500, the Medical Reserve Corps, active list, of about 120 officers, the Dental Corps, and the Army Nurse Corps, female.

GENERAL DUTIES OF ARMY MEDICAL DEPARTMENT

The medical department is charged with the duty of investigating the sanitary conditions of the Army and making recommendations in reference thereto, of advising with reference to the location of permanent camps and posts, the adoption of systems of water supply and purification, and the disposal of wastes, with the duty of caring for the sick and wounded, making physical examinations of officers and enlisted men, the management and control of military hospitals, the recruitment, instruction and control of the Hospital Corps and of the Nurse Corps, and furnishing all medical and hospital supplies except for public animals (U. S. Army Regulations).

For many years prior to the war with Spain, the greater part of our little Army was scattered in small bodies at frontier stations, for the protection of the outlying settlements against Indian raids. Under such conditions of service, the medical officer rarely came in contact with his colleagues in civil life, and only under exceptional circumstances into touch with civil hospitals or medical societies. Frequently he was the only physician within many miles of his station, and while such isolation appears to offer but slight incentive to professional advancement, it cultivated self-reliance, and for those who were studiously inclined, offered opportunities for study. It was under such circumstances that Beaumont of our army made his investigations on Alexis St. Martin, and gave us our first scientific knowledge of the physiology of digestion; and that Laveran of the French army made his investigations on the blood in malaria which led to his discovery of the parasite of that disease.

In more recent years, with the disappearance of the frontier and the settlement of the Indian question, troops were concentrated in larger bodies nearer cities, and the medical officer came into closer relationship with his colleague in civil life, and with the civil hospital. It then became possible to station a few officers for limited periods in the larger cities, where they could take advantage of the clinics, laboratories and other facilities of the civil hospital, and through the medium of medical societies they came in contact with civilian members of the profession.

ACHIEVEMENTS OF THE MEDICAL CORPS

At the outbreak of the war with Spain, our peace establishment, with an aggregate strength of 28,000, was suddenly expanded by the organization of the volunteers into an army of 120,000 men. Our occupation of Cuba, Porto Rico and the Hawaiian and Philippine Islands presented unknown problems to the medical department, and opened new and extensive fields in the domain of sanitation and preventive medicine. By the cultivation of these fields some of our preconceived theories of the origin and spread of certain diseases were overthrown, and these were replaced by facts established on a scientific basis. The fever-stricken camps of the South were not without their instructive lessons. I need hardly mention to this audience the value of the demonstration by the board of officers consisting of Reed of the regular army, and Vaughn and Shakespeare of the volunteers, that the typhoid of those camps was spread by contact and through the agency of the house fly; nor of the brilliant discovery of that other board of medical officers, in which Reed was associated with Carrol, Lazear and Agramonte, which gave to the world the knowledge of the manner in which yellow fever is transmitted, a discovery which made the Panama canal possible, the influence of which on the commerce, politics and international relations of the nations of the world cannot yet be foreseen.

The eradication of small-pox in Porto Rico and the Philippines, the conquest of hookworm disease in Porto Rico by Ashford of the Army and King of the United States Public Health Service, the work of the Board for the Study of Tropical Diseases in Manila, are all proof of the fact that the military medical service has made itself felt in the field of sanitation and preventive medicine, and that it merits recognition equally with the civil hospital as a factor in the development of the art of medicine.

Only under military control and authority have some of the achievements in preventive medicine been made possible. It was under such conditions that the efficacy of antityphoid vaccination was positively established. The results were so remarkable that a brief statement of the facts is excusable. In a command of a strength of 16,000, encamped near communities where typhoid prevailed, and with which communication was in no way restricted, but two cases appeared; in one of these the prophylactic treatment had not been completed; in the

* Read in the Symposium on Relations of the Hospital to the Public in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

other case, that of a civilian teamster, prophylactic treatment had been avoided. Never in the previous experience of our army had troops in such numbers been assembled under similar conditions with so small a rate of morbidity from this disease. To those of us who had gone through the experiences of the Spanish-American War, these results appear little short of marvelous.

There are other problems in preventive medicine of equal importance to the civil body which can probably be solved by the military physician better than by the civilian. One of these is the venereal question, a subject which has received the serious consideration of the military authorities from time immemorial. Accurate statistics regarding the prevalence of this class of diseases among the civil population, for obvious reasons, are not obtainable. In the military service, no difficulty exists in securing such data. There is no reason to believe that these diseases prevail to any greater extent among soldiers than among civilians, and from the data obtained in the service we are enabled to form some conception of their prevalence generally. This question is one that concerns the civil hospital fully as much as the military establishment, and our united efforts should be directed to its practical solution. The medical department of the army is now engaged in a campaign against this class of diseases, the results from which lead to the belief that an efficient prophylaxis, as one of the factors in prevention and control, is possible of attainment. It must not be understood, however, that the educational and moral sides of this question are lost sight of by the military authorities; those aspects, too, are seriously taken into consideration in its solution.

The medical department of the army early recognized the value of salvarsan to the military service, and our medical officers were among the first in this country to make use of it in the treatment of syphilis; since then they have made a number of valuable contributions to the literature of this subject.

From this brief and necessarily incomplete account of some of the achievements of the medical department of our army in time of peace, it is apparent that it has not lagged far behind the civil hospital, and that its labors have been of benefit to the civil community as well as to the military establishment. In consequence a more intimate relationship has been established between the civil and military life of the country, which tends to create a greater interest in the military establishment on the part of our people. It is to be regretted that this relationship cannot be strengthened further by assigning medical officers to duty at civil hospitals for limited periods, as is done in some of the foreign services; our numbers are, unfortunately, too small to permit this.

THE VOLUNTEER MEDICAL DEPARTMENT

We have already seen that the organized militia constitutes part of the land forces of the United States when called into active service; it then becomes national in character, and the President is its commander-in-chief. This force has an approximate strength of 120,000. Its medical department comprises about 800 officers and 2,600 enlisted men; it has eighteen field hospitals and thirteen ambulance companies organized and equipped.

The organization, armament and discipline of the organized militia when called into national service is the same as that of the regular army, and it receives the same pay and allowances; it participates in the maneuver and instruction camps with the regular army, and the War Department service schools, under certain restrictions, are open to its officers. Officers of the regular army are detailed to it as inspectors and instructors.

The medical officers of this force are, as a rule, earnest and capable, imbued with the proper military spirit, anxious and willing to learn from their colleagues of the regular establishment. The joint maneuvers and camps of instruction in which the regular army and the organized militia have participated biennially during the past eight or ten years have brought about a more intimate association, official, social and professional, between the two services, which has proved of mutual benefit to both classes of medical officers, and has been productive of increased military efficiency.

In the event of war, which is a possibility that may arise at any moment, the organized militia, after muster into the service of the United States, and the regular army increased to war strength, constitute the first line of defense. Our only method of supplementing this force is by the organization of a volunteer army. Like the organized militia, it is subject to the same laws, orders and regulations as those governing the regular army; it can be organized only when war is actually existent or imminent, and practically the entire body is drawn from civil life, and is without military training or experience.

IN TIME OF WAR

Under our field service regulations the medical department is charged with the administration of the sanitary service, and its personnel, in time of war, includes:

1. All persons serving in or employed by the medical department.
2. Members of the American National Red Cross Association assigned to duty with the medical department by competent authority.
3. Individuals whose voluntary service with the medical department is duly authorized.

Specifically its duties are:

1. The initiation of sanitary measures to insure the health of troops.
2. The direction and execution of all measures of public health among the inhabitants of occupied territory.
3. The care of the sick and wounded on the march, in camp, on the battle-field and after removal therefrom.
4. The methodical disposition of the sick and wounded so as to insure the retention of those effective and to relieve the fighting force of the non-effective.
5. The transportation of the sick and wounded.
6. The establishment of hospitals and other formations for the care of the sick and injured.
7. The supply of sanitary *matériel* necessary for the health of troops and for the care of the sick and injured.
8. The preparation and preservation of individual records of sickness and injury, in order that claims may be adjudicated with justice to the government and to the individual (Field Service Regulations).

In addition to caring for the sick and wounded, medical officers act as sanitary advisers of commanders, and instruct the troops in personal hygiene. Beginning with camp sites and the water-supply, they continue their supervision of these and other sanitary matters to the close of the campaign (Field Service Regulations).

The sanitary service in the field is divided into service with the mobile forces, including camps and bivouacs, marches and combats, and service of the line of communications, including all sanitary formations not accompanying the troops.

The sanitary formations accompanying the mobile forces are ambulance companies and field hospitals (Field Service Regulations).

The home territory, in which new troops are being organized, trained and mobilized, with its large military hospitals, convalescent camps and supply depots, must also be provided with its necessary quota of medical department personnel.

INADEQUACY OF PRESENT PERSONNEL

It is unnecessary for our purpose to enter into more detail regarding the functions and organization of the medical department in time of war. Enough has been said to make clear the complexity of an efficient sanitary service, and to make evident the varied qualifications that the military medical officer should possess. The personnel of our present medical department organized, as prescribed in our field service regulations, is inadequate even for the strength of our present peace establishment, and in the event of war and a necessarily increased military establishment we shall be compelled to call on the civil physicians of the country to supply the necessary medical officers. There is no lack of excellent talent among the medical profession, and in time of national danger their services unquestionably will be freely and unselfishly tendered to the nation. We are justified in the belief that the best material will be secured from the civil hospitals. The organized system, the orderly routine and the coordination among the different departments which exist in the better class of these institutions greatly facilitate the training of such a personnel for military duty. The medical staff, trained in hospital methods, and specialists in the various branches of medicine will be invaluable to the military service, especially at our general and base hospitals. It was primarily with this object in view that the law establishing the Medical Reserve Corps was enacted.

This corps is composed of active and inactive members; the former are assigned to duty with troops, and supplement the regular corps; at present there are approximately 125 of these officers in active service. The inactive list of this corps numbers upward of 900 members, and includes former volunteer and contract surgeons of the army and many eminent hospital physicians. On the occurrence of the emergency under which they are ordered into active service, they would be assigned to the particular duty for which their experience and special qualifications best fitted them. This latter class has manifested great interest in medicomilitary subjects, as shown by the organization of a number of medical reserve corps associations. It is especially unfortunate that our government gives so little encouragement to these inactive officers, as no provision of law exists under which they can be ordered to duty with troops at maneuver and instruction camps, in order that they may obtain the practical experience so essential in military medicine.

The civil hospitals, too, in time of war may be called on to render assistance to the military establishment. No one can foretell when war may burst on us, or what unseen needs may suddenly arise as a consequence. We have military hospitals and posts which could be quickly expanded or converted into general hospitals for a sudden influx of sick and wounded, but should we become overwhelmed early in the campaign with large numbers of disabled we would be obliged to avail ourselves of the facilities of these institutions. Especially might this be the case in the mobilization of new troops near large cities.

HOW THE CIVIL HOSPITALS CAN HELP

Among a people like ours, where war ever appears remote and military service is not compulsory, it is not strange that its citizens take but little interest in military subjects; yet it is the solemn obligation of every citizen to bear his share of the burden that war may impose. Our civil hospitals, through their staffs, wield a powerful influence on professional thought and opinion, but beyond the enrolment of some of their members in the Medical Reserve Corps have accomplished little toward arousing an appreciation of the military obligations that rest on the medical profession in time of war. How can the civil hospital aid in increasing the military efficiency of the nation? By stimulating interest in the army as a career for its well-trained and capable graduates. While the material returns of the service are limited, in the early years at least, the emoluments are far greater than that of the young physician who enters on a professional career in civil life. The experiences gained and opportunities enjoyed are many and varied. It is the policy of the department to encourage study and original work and to recognize merit, and every opportunity is extended to its officers to advance themselves professionally. That it recognizes the value of men trained in civil hospitals is manifested by the requirement that every candidate for the medical corps must have had at least one year's experience as an intern in a civil hospital after graduation in medicine.

The same class of men is also desirable for service in the Medical Reserve Corps. To this class of officers when inactive, unfortunately, slight opportunity is afforded either for professional advancement or for military training, and we must appeal to their generosity and patriotism should the emergency arise calling them to active service. In his last annual report the Surgeon General of the Army makes the following remark in speaking of this class of officers:

> The profession in civil life is just as well qualified to treat the medical and surgical disabilities incident to the military service as are officers of the medical department, but they can never become familiar with the many special duties required of medical officers except by practical experience with troops.

The training of these officers should not be postponed until after the appearance of the emergency under which they are called into active service; they should be afforded the opportunity of gaining that practical experience with troops which is so essential to their efficiency as military medical officers. Here again, much can be accomplished by the civil hospitals, through concerted action on the part of their staffs looking to the enactment of the legislation necessary to make such opportunity possible.

The efficiency of an army is dependent on the efficiency of its elements, and not the least of these is its medical department; and it is to the medical profession of the country, typified in the civil hospital, that we must look for the success of this factor in the military establishment.

The relationship between the civil hospital and the military establishment has been growing closer; still closer affiliation will result in increased interest in military affairs, and prove mutually beneficial to both branches of our profession.

ABSTRACT OF DISCUSSION

Dr. Samuel C. Plummer: Up to a few years ago there was little communication between military and civil surgeons, but now that many Army surgeons are stationed nearer the cities there is an opportunity for the two to become better acquainted in the hospitals and clinics. I hope that the relationship will grow closer.

DR. CHARLES RICHARD, Washington, D. C.: The point I wish to bring out in my paper is that few members of our profession know much of our Army and its medical department organization, or of the responsibilities of the latter in case of an outbreak of war. The greatest force we could organize and put into the field at once would consist of the militia and regular army, consisting of about 200,000 men. Of that force, a certain proportion (about one-fourth or one-fifth) would be needed to look after the sea-coast defenses. The militia, under our present laws, cannot be taken out of the country, so that in the event of invasion of a foreign country we would have to depend on untrained volunteers and that part of the regular army that could be spared from the defenses of the country. For this force an adequate medical department personnel would also be necessary. Every doctor in our country should appreciate that he can become a part of the military strength, but to do this he must take sufficient interest in the subject and learn something of the requirements of the military service. It was partly with this point in view that the Medical Reserve Corps was formed. Its members are furnished with medicomilitary literature by the War Department, and they have shown their interest by the formation of societies in which these subjects are discussed, and are becoming more and more interested in the military branch of our profession. I have no doubt that when the occasion arises, the vast majority of the members of the Medical Reserve Corps will do excellent work. The administrative work will necessarily fall to the regular Medical Corps until the Reserve Corps has gained experience in such work.

HOSPITALS AND THE HEALTH PROBLEM

WITH SPECIAL REFERENCE TO THE NEEDS OF RURAL AMERICA *

E. E. MUNGER, M.D.
SPENCER, IOWA

What is America's health problem? Briefly, it is to prevent preventable disease, cure curable disease, relieve suffering, prolong life and to do all these things in the most intelligent, satisfactory and economical manner possible. Toward the solution of this problem much is being done by states and cities through more and more efficient health departments; a part of the public press is giving generously of its space for the dissemination of knowledge pertaining to health and disease; the church is concerning itself with the problem in a manner that augurs well for the future, as, witness, Hospital Sunday, Tuberculosis Sunday, and health sermons based not on fads and fancies but on facts.

MORE COUNTRY HOSPITALS NEEDED

It is not my purpose to deal with the question of prevention, except to point out how necessary it is to care for and cure disease in order to prevent it. I shall have accomplished my purpose in part if even in small degree my paper helps to fix attention on the necessities of rural America in the solution of the health problem and on the fact that the modern hospital is everywhere a necessary adjunct to the application of preventive and scientific medicine and surgery. Notwithstanding the advantages of natural environment, rural people have not the same opportunity for health conservation that urban residents have.

The mortality-rate for almost all diseases is lower in rural districts than in cities. It is probable that a considerable proportion of the difference is due to the fact that residents of the former, when critically ill, resort to the institutions and hospitals in cities for treatment, and when deaths occur they are registered in the cities and increase the mortality of the latter.[1]

One notable exception is typhoid. The mortality-rate for this disease in 1910 for cities in registration states was 22.4 per 100,000 population; for the rural part of registration states, 23.3.[2]

HOSPITAL TREATMENT FOR RURAL TYPHOID

In view of the fact that rural typhoid in America is nearly always treated in the home, two significant statements are quoted:[3]

This rural frequency is important for dwellers in cities. The water-supply and milk-supply, as well as many articles of food, are derived from the country. There is a constant going and coming between the city and country. An infected city may spread infection far and wide through the country, while from the country there may be a steady stream of infected persons into the city.

The stamping out of typhoid fever is one of the great tasks before the profession of this country. The story is such an old one that little attention is paid to it. We of the profession shrug our shoulders and wonder at the apathy of civic authorities. Are we guiltless? Every patient with typhoid fever means infection from a previous one. If thorough disinfection were carried out in every case of typhoid fever this year, and the same next year, what a decrease there would be in the incidence of the disease! Disinfection is often in the hands of persons who do not realize the importance of its being thorough, and it is no easy task for the physician to see that it is carried out. Too often he does not realize his own responsibility and is thoroughly satisfied if he brings the patient well through the attack, heedless of the danger to the community.

If possible the patient should be treated in a hospital. The advantages of this are many, for in few houses can a patient be handled as satisfactorily as in a hospital. The nursing can be done in a better way, the complications may be recognized and treated earlier and the requisite disinfection carried out more thoroughly. In country practice and in many places hospitals are not available and the best that can be done has then to be done.

It has been estimated that probably 8,000 persons in the United States die every year from perforation of the intestine in typhoid fever and perhaps 2,500 of these can be saved by proper treatment.

In a country physician's practice, a typhoid patient with this complication has no more chance for existence than a snowball in a kettle of boiling water.

In 1910 the death-rate from tuberculosis of the lungs was 139.7 per 100,000 population; from pneumonia, 147.7; organic heart disease, 141.5; diarrhea and enteritis (under 2 years), 100.8; nephritis and Bright's disease, 99.0. In other words, there were in the United States in 1910, approximately 131,000 deaths from tuberculosis of the lungs; from pneumonia, 140,000; organic heart disease, 133,000; diarrhea and enteritis, 95,000; nephritis and Bright's disease, 93,000.

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* Read in the Symposium on Relations of the Hospital to the Public in the Section on Hospitals of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

1. Mortality Statistics, 1900-1904, Bureau of the Census.
2. Mortality Statistics, Bulletin 109, 1910: "Of the registration cities of 100,000 population or over, in 1910, Omaha, Neb., had the highest rate, 86.7. Other cities with high rates for the year were Minneapolis, 58.7; Kansas City, Mo., 54.4; Atlanta, Ga., 50.1; Birmingham, Ala., 49.5; Nashville, Tenn., 48.9; Milwaukee, Wis., 45.7; Spokane, Wash., 45.4; and Baltimore, Md., 42. The lowest rates shown for the large cities were those of Bridgeport, Conn., 4.9; Paterson, N. J., 7.1; Cincinnati, 8.8; and Cambridge, Mass., 9.5. These rates approach the rates of typhoid mortality of the leading cities of western Europe, examples of which for the year 1910 were as follows: London, four per 100,000; Edinburgh, two; Dublin, ten; Paris, seven; Brussels, nineteen; Amsterdam, seven; Copenhagen, three; Stockholm, four; Christiania, two; Berlin, four; and Vienna, four."
3. McRae, Thomas: Osler's Modern Medicine, 1907, ii, 78, 71, 209, 208.

TREATMENT OF PREVENTABLE DISEASES

On every hand we are being taught a great deal about tuberculosis; the instruction, most of it, is authoritative, timely and important, and is accomplishing results. Nevertheless, when it is known that the total number of deaths in the United States from the great white plague (all forms) is approximately 151,000, while from the other four diseases just mentioned it is about 461,000, one must inquire why tuberculosis should occupy the stage to the exclusion of the other characters whose parts must be played if the sequel is not to be disappointing. Is not a man who has died of heart disease just as dead as the one from tuberculosis? True, the latter has had with him the infective element in larger measure and he is entitled to the title rôle; still, the deaths from other infections disclose the real tragedy of preventable disease.

"Heart disease in about 50 per cent. of all cases is a sequence of acute endocarditis. Among 670 cases of chronic heart disease at the Leipsic clinic 58.5 per cent. followed acute rheumatism. In the all-important endocarditic group of the acute infections, rheumatic fever plays the important rôle. There is no single problem of greater importance in preventive medicine than the reduction of the enormous waste of life in children in consequence of the rheumatic infection."[4]

Here is one of the peculiarities of mortality statistics: If a patient with a crippled heart contracts pneumonia, typhoid or other disease and dies because his limited heart-power is not sufficient to carry him through the crisis, death is attributed to the preceding acute disease. If he dies from heart-disease some time after apparent recovery from the acute infection which caused it, the latter is infrequently mentioned as even a contributory cause of death. Hence we find the death-rate from rheumatism only 7.4 per 100,000 of population, while it is responsible for more than one-half the cases of chronic heart-disease.

In no disease is it more important than in rheumatism that the physician "should be a watchman all the time," for on the early detection of heart complications may depend the life or future usefulness of a patient. If it were possible in the beginning of the attack to remove patients with acute rheumatism from their unhygienic surroundings to hospitals near at hand and there find proper diet and facilities for care and treatment, including that important adjunct to modern medicine, the trained nurse, all would be done that can be done toward lessening the severity of the attack, adding to the comfort of the patient and preventing the disastrous complications, of which heart-disease is the most common.

Rarely, indeed, can one find in a rural district a patient with rheumatism receiving the benefits of hospital care, or one who can be prevailed on to provide for himself early and suitable nursing at home, or tolerate on the part of the physician the watchfulness so necessary for sensible and successful treatment.

The rural pneumonia portion of the health problem can be solved in part, at least, if suitable hospital provision for its treatment can be made. It is well known that when we are dealing with this disease "the scenes change rapidly and the passage of an hour or two may present an entirely different picture. The obvious lesson of this is that pneumonia patients should be watched carefully and seen by the attending physician at frequent intervals, especially during the latter part of the disease, when judicious and well timed medication may tide the patient over the crisis to recovery."[5]

How is the country physician to follow this sound advice? The reasons why he cannot are perfectly plain to both the patient and the physician. In cases of diarrhea and enteritis and other children's diseases, the rural hospital, with its complement of visiting nurses, can materially help to solve the infant-mortality part of the health problem.

Time does not permit a discussion of the whole question, yet your attention is asked to two of its minor, but none the less important, elements:

In 1910 there were approximately 8,000 deaths from appendicitis in the United States—not a large number when compared with deaths from other causes, but rather formidable in the light of this indictment by one of the world's greatest surgeons.[6] He says:

It seems to me that every death from appendicitis is chargeable directly to the people, for not calling in the physician sufficiently early after the onset of the symptoms, or to the physician and surgeon for not acting promptly when they are called. We are sorry to admit that the latter represents the greater percentage. We should have no deaths from appendicitis, but we are having them. We should accept the force of numbers and experience to guide us against the culpable, if not criminal, error of delay in this class of cases.

Granted that delay is both culpable and criminal, blame should not be laid entirely on the people or on the physician, or even on both; it is due rather to the want of instruction relative to the achievements of scientific medicine and surgery. Some there are who, practicing what they teach, cure every case of appendicitis with colon tube and olive oil—excepting only those that die of peritonitis.

In a great city, living under the very eaves of a modern hospital, a physician who would allow a patient to die from appendicitis for the want of timely surgical treatment is no doubt culpable in a degree approaching criminality. In the country, when one has any serious sickness, especially if the trouble is appendicitis, procrastination is as common as it is dangerous. An operation in the home is never consented to excepting as a last resort; in order to get to the hospital the patient must endure a variety of hardships incident to a long railway journey for a very sick person. The patient dies while waiting to recover sufficiently to be able to go away; the death certificate is made out as best suits the exigencies of the occasion, and thereby hangs a tale which mortality statistics do not tell.

In 1910 approximately 15,000 mothers died from diseases and accidents incident to childbirth; nearly 7,000 of these from puerperal septicemia. There were 70,000 deaths from premature birth and diseases and injury peculiar to early infancy—a total of 85,000 mothers and infants dying annually in the United States from causes which all authorities agree are largely preventable or curable. These cold figures do not disclose their sorrowful story; the resulting desolation, woe and despair beggar description.

Mortality statistics for maternity hospitals confirm the following statement:[7]

The hospital is now the safe place for a woman to be delivered in; it is in the private dwellings that danger lurks. The poorest, the dirtiest, the most dissolute women are safely confined in a hospital; the richest, the youngest, the purest and the loveliest sometimes succumb in giving birth to a child in their own homes.

4. Osler and Gibson: Osler's Modern Medicine, 1908, iv, 205, 256.
5. Musser and Norris: Osler's Modern Medicine, 1907, ii, 636.
6. Murphy, J. B.: Keen's Surgery, 1908, iv, 778.
7. Garrigues: Quoted by Dobbin, Handbook of the Medical Sciences, 1907, v, 379.

HOSPITAL LEGISLATION IN IOWA

In 1909 the Thirty-Third General Assembly of Iowa became interested in the hospital and health problem; its members recognized that rural communities, in dealing with accident and disease, do not have the same advantages as urban residents. Little argument was required to convince this body of intelligent and earnest men that any considerable number of people should have at least the right to work out their common health problem. They scarcely listened to the contention that such a privilege would result in a tax on the many for the benefit of the few. Proportionate taxation for the benefit of all admitted of no argument, and this legislature deliberately enacted the law making possible, in Iowa, the ultimate establishment of an adequate supply of hospitals with equal rights to all and special privileges to none.[8]

The author of this law had in mind the necessity that exists, and it was his purpose to establish a public hospital with a board of trustees that will become a board of lay sanitarians who, in formulating such rules and regulations as will enable the hospital to be of the greatest good to the greatest number, will become informed about health matters and will be influential factors in the solution of the community's health problem.

There will be neither incentive nor opportunity to make such a hospital a money-making institution. Crime and graft in the form of illegal and unnecessary operations, wrong diagnoses for the sake of prolonged treatment, unwarranted division of fees and other evils cannot go on undiscovered and unexposed. It will furnish its care at the lowest price requisite for proper maintenance; it will not concern itself with the fees of its physicians and surgeons except in those cases in which patients are subjects for charity. It may, however, frown on exorbitant and extortionate charges. It will be conducted on a strictly ethical basis and be made the health center for a community — a center from which health information will be disseminated by both precept and example. Its equipment will be complete with every facility for up-to-date work; it will have a pathologic and bacteriologic laboratory, which should be auxiliary to the laboratory of the state board of health. An ambulance service will be provided. A necessary and most important adjunct will be a training-school for nurses. An *x*-ray laboratory will confer great benefits on both patients and physicians. At such a hospital the fact will be recognized that there are many specialists of signal ability whose services may be required from time to time. In order that the people of a community may, on occasion, have the benefit of their skill and experience, a consulting staff acceptable to the people will be selected by its physicians and surgeons.

It was not the intent of the law to supplant standard hospitals; all have the common function of caring for the sick and disabled. Some perform a dual service by reason of their affiliation with medical colleges, furnishing the practical training for surgeons, physicians and nurses. Many are of high class, others are good, some tolerable, some merely boarding-houses with "operating-room" and "rooms for rent," and some are positively bad. The present and urgent need is the establishment of an adequate supply of reputable hospitals, all to be standardized and inspected as the logical sequence to the same processes for medical colleges and their graduates. As a result the great surgeon will become greater and the good physician and surgeon better. The poor, careless, indifferent few who endanger society and who are the curse of reputable medical men will be driven out of the profession, removing the point of attack for carping critics who, under the auspices of the league for medical riot, go about the country, disguised with the cloak of freedom, noisomely assailing the honor and integrity of the entire medical profession and offering jeopardy as a substitute for safety.

It is noteworthy that the first hospitals built under the Iowa law were located in counties bearing the names of Washington and Jefferson. The table shows the hospital situation in the United States, and the map, the number and location of public and private hospitals,

Map of Iowa. A circle indicates a private hospital; a solid dot, a public hospital; T, a tuberculosis hospital; the figures indicate population and total number of beds in each county.

8. Some Fundamental Truths: (1) A number of people will have a varying amount of sickness. (2) Of this amount of sickness, a fairly definite and constant portion requires and should have the advantages of hospital treatment. (3) A given disease presents the same general characteristics and is the same thing wherever it exists. (4) Whatever is known to be the very best treatment of any disease should be made available to all persons afflicted with disease. (5) Of the total number of persons who are ill a few may have homes and the means that will enable them to be fairly well cared for, but the vast majority are not so situated. (6) In all cases of serious sickness, whether medical or surgical, nursing, diet and sanitary environment are of prime importance in treatment. (7) While trained nursing is an essential part of the treatment, the cost of such nursing is so high that it is next to impossible for any but the very well-to-do to avail themselves of its great benefits. (8) People are needlessly dying, suffering, and being handicapped both physically and financially every year, every month, every week and every day, because of the lack of hospital advantages within their reach and means. (9) Every human being, with only enough exceptions to prove the rule, having arrived at the age of discretion, regards his health as his most valuable possession and his life as the one thing for which he is willing to exchange all else. (10) Hospitals, to fulfil their mission, should be established with reference to a given number of people, be maintained by the people and conducted primarily for the people.

the number of beds and the proportion of beds to population in Iowa.[9] In studying this bear in mind that "those best qualified to judge seem to be of the opinion that every civilized community requires one hospital bed for each 100 inhabitants."[10]

Women and children first on the sea! What of mothers and infants on the land? We stand aghast at news of an appalling *Titanic* disaster, telling of over 1,500 lives lost at sea. The governments of two nations instantly prepare for an investigation of causes and quickly fix responsibility. There is no delay. The court of inquiry has convened beside the sea and is the port of entry for survivors. This alertness is striking, compared with the dilatory tactics pursued when measures are proposed for the remedying of needless waste of life on land.

If we think of each state as a gigantic *Titanic* carrying its cargo of human souls across the sea of life, having in mind the icebergs that hazard the voyage from birth to death, we are blind, or will not see, if we do not pay attention to the insufficient number and uncertain character of some of each ship's life-boats.

CONCLUSION

In conclusion, and in order that more and better means may be provided for the safety of passengers and crew, competition here and there and now and then should reasonably yield to cooperation for health conservation; there should be developed a public hospital system fashioned somewhat after the public-school system, and our national health should be made an ever-increasing national asset. With these ends in view Congress should enact into law the measure creating a national department of health with as many bureaus as may be necessary to enable it to perform its main function of "enlightening and directing public opinion in regard to the broad problems of hygiene and representing to the world the practical accomplishments of scientific medicine." Congress should realize that such legislation will promote the physical welfare and domestic tranquillity of our people and clearly be in accord with the high ideals of the fathers who wrote these words into our constitution.

HOSPITALS AND SANATORIUMS OF UNITED STATES *

State	Proportion of Beds to Population		Public		Private		Tuberculosis				Corporation		Total Hospitals
							Public		Private				
	Population	Beds	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	
Alabama	2,138,093	2,774	10	1,627	30	1,036	2	49	...	.....	2	62	44
Arizona	204,354	893	5	58	20	478	2	58	6	225	1	74	34
Arkansas	1,574,449	2,236	14	991	15	907	1	74	...	.....	1	264	31
California	2,377,549	13,709	96	6,326	183	6,032	5	397	13	696	2	258	299
Colorado	799,024	4,759	30	1,743	48	1,535	4	214	10	787	4	480	96
Connecticut	1,114,756	4,407	24	2,349	27	1,401	1	110	5	547	..	.....	57
Delaware	202,322	448	6	402	1	38	1	8	...	.....	..	.....	8
Florida	752,619	1,066	20	540	17	406	..	.....	...	.....	2	120	39
Georgia	2,609,121	3,076	16	1,809	40	880	2	82	5	205	1	100	64
Idaho	325,594	1,157	19	643	21	374	..	.....	1	100	1	40	42
Illinois	5,638,591	18,285	95	7,028	140	8,497	2	1,835	4	815	2	110	243
Indiana	2,700,876	6,231	45	2,791	74	3,001	2	110	4	122	2	207	128
Iowa	2,224,771	4,890	60	2,396	64	2,260	2	144	1	20	1	70	128
Kansas	1,690,949	3,382	30	1,535	58	1,711	..	.....	2	21	2	115	92
Kentucky	2,289,905	2,751	27	1,930	36	651	1	50	...	.....	1	120	65
Louisiana	1,656,388	2,718	7	1,613	20	1,055	..	.....	2	50	..	.....	29
Maine	742,371	1,542	21	1,159	14	283	..	.....	1	100	..	.....	36
Maryland	1,295,346	4,866	33	3,023	22	990	2	600	3	235	3	18	63
Massachusetts	3,366,416	15,474	69	6,974	158	6,367	9	1,482	13	651	..	.....	249
Michigan	2,810,173	7,237	69	2,612	91	4,075	2	322	1	48	1	180	164
Minnesota	2,075,708	6,286	57	3,678	85	2,118	4	260	3	75	2	155	151
Mississippi	1,797,114	1,061	9	429	22	632	..	.....	...	.....	..	.....	31
Missouri	3,293,335	7,849	33	3,516	93	4,011	1	150	1	22	1	150	129
Montana	376,053	2,384	15	606	25	1,630	..	.....	...	.....	5	148	45
Nebraska	1,192,214	4,166	26	3,543	35	713	..	.....	...	.....	..	.....	61
New Hampshire	430,572	1,102	22	775	12	222	1	35	2	70	..	.....	37
New Jersey	2,537,167	6,700	48	4,434	33	1,663	4	445	1	158	..	.....	86
New Mexico	327,301	947	8	89	19	263	2	52	8	445	3	98	40
New York	9,113,279	42,904	180	23,012	234	16,035	15	2,817	16	906	2	134	447
Nevada	81,875	498	9	296	7	173	..	.....	...	.....	3	29	19
North Carolina	2,206,281	2,364	19	725	50	1,367	1	50	7	185	2	37	79
North Dakota	577,056	1,200	17	611	23	589	..	.....	...	.....	..	.....	40
Ohio	4,767,121	15,126	109	11,838	107	2,950	6	294	...	.....	1	4	223
Oklahoma	1,657,155	1,245	10	270	40	963	1	12	...	.....	..	.....	51
Oregon	672,765	2,109	11	795	29	1,212	1	62	1	40	..	.....	42
Pennsylvania	7,665,111	29,340	83	22,643	92	4,289	7	1,962	4	396	1	50	187
Rhode Island	542,610	1,628	8	305	11	921	4	402	...	.....	..	.....	23
South Carolina	1,515,400	834	8	332	17	431	2	65	...	.....	1	6	28
South Dakota	583,888	1,069	10	442	19	613	1	14	...	.....	..	.....	30
Tennessee	2,184,789	2,753	18	1,365	49	1,322	..	.....	2	66	..	.....	69
Texas	3,896,542	7,444	30	1,726	90	5,277	1	60	5	256	4	125	130
Utah	373,351	1,327	9	920	11	395	..	.....	..	.....	2	12	22
Vermont	355,956	965	6	521	14	400	..	.....	1	44	..	.....	21
Virginia	2,061,612	2,870	22	1,076	43	1,545	2	131	2	27	1	91	70
Washington	1,114,990	4,285	42	3,012	49	1,210	1	31	1	32	..	.....	93
West Virginia	1,221,119	2,078	12	657	42	1,376	..	.....	...	.....	2	45	56
Wisconsin	2,333,860	6,015	54	3,084	80	2,584	2	190	3	107	1	50	140
Wyoming	145,965	394	7	286	8	90	..	.....	...	.....	1	18	16
District of Columbia	331,069	1,799	8	895	6	734	2	170	...	.....	..	.....	16
Totals	91,944,925	260,643	1,586	139,340	2,424	97,745	96	12,737	128	7,451	58	3,370	4,292

* Insane hospitals, reformatories, homes for aged, feeble-minded, blind and orphans, county poor farms and similar institutions not included. The table was prepared to show in a general way the number and kinds of hospitals in the United States and the proportion of beds to population. No claim is made for more than approximate accuracy.

ABSTRACT OF DISCUSSION

DR. G. W. GREEN, Chicago: How is it proposed to maintain county hospitals?

9. Compiled from American Medical Directory, 1912, Ed. 3.
10. Ochsner and Sturm: The Organization, Construction and Management of Hospitals, 1909, p. 11.

DR. E. E. MUNGER, Spencer, Iowa: The law provides that the board of supervisors may appropriate a certain percentage of the county general fund for maintenance. In the rural districts of Iowa there are few paupers and the question of maintenance is not a serious one. The establishment of a public hospital will create no new expense beyond the cost of building and equipment. Every person who is able will pay a reasonable price, to be fixed by the board of trustees, for his hospital care. Those who are unable to care for themselves are now being cared for by charity in one form or another.

MISS M. E. MCCALMONT, Brooklyn, N. Y.: The question is really the large problem of rural nursing. Has Dr. Munger any practical solution for it?

DR. E. E. MUNGER, Spencer, Iowa: The health problem is a community problem and should be solved on a cooperative community basis—this does not mean a socialistic basis. It must be the ultimate object of scientific medicine and surgery to bestow its benefits on all people alike. How this can be done without an adequate supply of standard hospitals, located and conducted with reference to the needs of the people, I do not know. The blue-prints give some idea of the completeness of the Washington and Jefferson county hospitals, which will be ready for formal opening within a few weeks. It is confidently expected that these counties will set an example which will be followed by many rural communities. They will solve the problem of delay in operative cases, and medical and obstetric cases will find an environment where good care will prevent many fatalities and bad results hitherto attributable to lack of care. These hospitals will have training-schools for nurses. Their graduates may not all become expert surgical assistants, but they can be intelligent general nurses and there is urgent need for a much larger number of these.

DR. D. S. FAIRCHILD, Clinton, Iowa: I come from the same state that Dr. Munger does. In Iowa we have only one city which has 100,000 population, but ours is a very prosperous farming community and comparatively rich. These people are able to take care of themselves when sick and have no occasion to avail themselves of charity. So far as the hospitals in small towns are concerned, no provision will be necessary for charity cases, as there are practically no poor people. I cannot therefore join with Dr. Munger in his enthusiasm for the county hospitals, but the problem will probably be solved in time. This hospital agitation, however, will have a great influence in educating the people to the advantage of better methods of medical and surgical treatment. In our agricultural communities the money question will always enter into matters of this kind, and the question of maintenance will be of so much importance that the people will be slow to tax themselves until they are convinced that the hospital may be self-supporting.

In regard to training nurses, I believe that the county hospitals will have difficulty in securing the better class of applicants for the training-school. I am told that in towns of 10,000 to 15,000 people the hospitals now have trouble in securing high-grade girls. The tendency seems to be for the better class of young women to seek application in the training-schools located in the larger cities. The question of hospital extension is one that must necessarily work itself out slowly.

DR. E. E. MUNGER, Spencer, Iowa: The proposition was defeated in my county by a vote which under ordinary circumstances should be accepted as final; but two other counties 300 miles away carried the same proposition by large majorities. We must wait a little while to determine whether final success depends on enthusiasm or on results. Bona fide donations of nearly $15,000 to the hospital, conditioned only on the voting of a one-half mill tax, did not help matters. These offers were so generous and unusual that the donors became subjects for suspicion and derision. The question of farmers not being willing to be taxed for the public health suggests the thought that health is quite as important as education. The tax for a hospital in a rural community is a mere trifle compared to the school-tax. If results justify the expenditure not much complaint will be heard. The question may well be asked whether many small, private and competitive hospitals—some with meager laboratory equipment, others without even a microscope—can ever become the efficient factors hospitals should be in solving the health problem. They certainly cannot if they are conducted largely for the purpose of doing selected surgical operations and serving the interests of the proprietors instead of the public.

MISS M. E. MCCALMONT, Brooklyn: Would it not be possible to have a district nursing organization, properly supported, on which the surgeons from outlying districts could call, taking nurses with suitable surgical equipment into the homes of the farmers? The expense would be much less and the work more far-reaching, with possibilities of educational propaganda.

DR. JOHN ALLAN HORNSBY, Chicago: Is your idea that the girls who are nursing in private cases could keep a small equipment on hand, such as is needed by graduated nurses who are on duty in towns where there is no hospital, to prepare a home hospital?

MISS M. E. MCCALMONT, Brooklyn: Yes, and that they be paid by the county or state, or community, but with the proviso that hospitals or outside surgeons or medical men could have the benefit of this organization.

DR. JOHN ALLAN HORNSBY, Chicago: I recently attempted to get a line on the nursing facilities and equipment of the hospitals. I wrote to all the state boards of nursing registration and fully expected to get some sharp lectures, but instead of that I received long, fine and thoroughly well-thought-out letters from these women that were a marvel to me; I found that, instead of traveling at cross-purposes with the nursing profession I was traveling in the same direction and keeping close company with them. I found that their ideals and ambitions were the ideals and ambitions of the medical profession, as I knew these ambitions. We are not apart at all. There seemed some time ago to be a feeling that the nurses were going a little too fast; that the nursing leaders were insisting on too high a grade of preliminary education and too refined a training from an educational standpoint, according to the present status of the market, so far as material for nurses was concerned. And possibly that is true. I know it is true in some places—in our own section of the country for instance. We have been accustomed in Chicago to take grammar-school graduates until recently. These grammar-school graduates are in our training-school—some in the junior class and some in the intermediate class. Some of the other training-schools have set the high-school standard, and all of a sudden the state commission promulgated a notice to the effect that they would not register schools that did not have a curriculum prescribed by that commission. Now here we had girls in our training-school that had not had training to work out this curriculum. In addition, the commission demanded a number of hours' study each day and theoretical work in class. Some of these girls were not capable of working that number of hours; they were tired and incapable of doing the work because they had not acquired the habit of theoretical application in their school days. For these reasons we have fallen down somewhat in an effort to rise to the curriculum as it has been given to us by our State Board of Commissioners; but we are coming to it. There are some of us pushing it continuously, for some girls who are training can do it, but the great mass cannot.

MISS M. E. MCCALMONT, Brooklyn: I am not here as a representative of the nursing profession, but in the general interest of hospitals. I, myself, do not believe that the nursing profession is meeting the demands of the people. The nurses of our training-schools are not all that they might be. The reasons for this are many and the discussion is a lengthy one. I do not believe, however, that the leaders are entirely unanimous in their ideas of training and training-school methods.

A QUICK METHOD FOR ACCURATELY DIFFERENTIATING THE SPECIES OF HOOKWORM OF MAN

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The most satisfactory method of demonstrating to a student the points of difference between *Ankylostoma duodenale* and *Necator americanus* is by showing him the characteristics of the buccal capsule of each species. The difficulty, however, is with properly orienting the worm so that a direct view may be had of the mouth-opening. Should a lateral view of the anterior extremity present, it is difficult to point out the anatomic differences.

In order to present these points as they appear to me, I have so oriented the two human species as to give a direct view into the buccal capsule and from such specimens the illustrations given have been prepared. Figure 2a shows the buccal cavity of *Necator americanus* as seen with the 2/3 inch objective and Fig. 2b as seen with the 1/6 inch objective. In 4a and 4b are similar drawings for *Ankylostoma duodenale*. The four hook-like ventral teeth and the much larger mouth-opening of the Old-World hookworm is in striking contrast to the smaller opening, semilunar lips and prominent dorsal median tooth of the New-World species.

Should it be desired to study further the points of difference between the two species, the next step is to examine the copulatory bursa of the male. The figures 1a and 1b show distinctly the deep cleft separating the two branches of the dorsal ray of the copulatory bursa of *Necator americanus* with their bipartite tips. In 1b the dorsal ray is magnified as seen under a 1/6 inch objective. Figures 3a and 3b give the characteristics of the dorsal ray of the copulatory bursa of *A. duodenale*. In this species the cleft dividing the branch is shallow and the tips tridigitate.

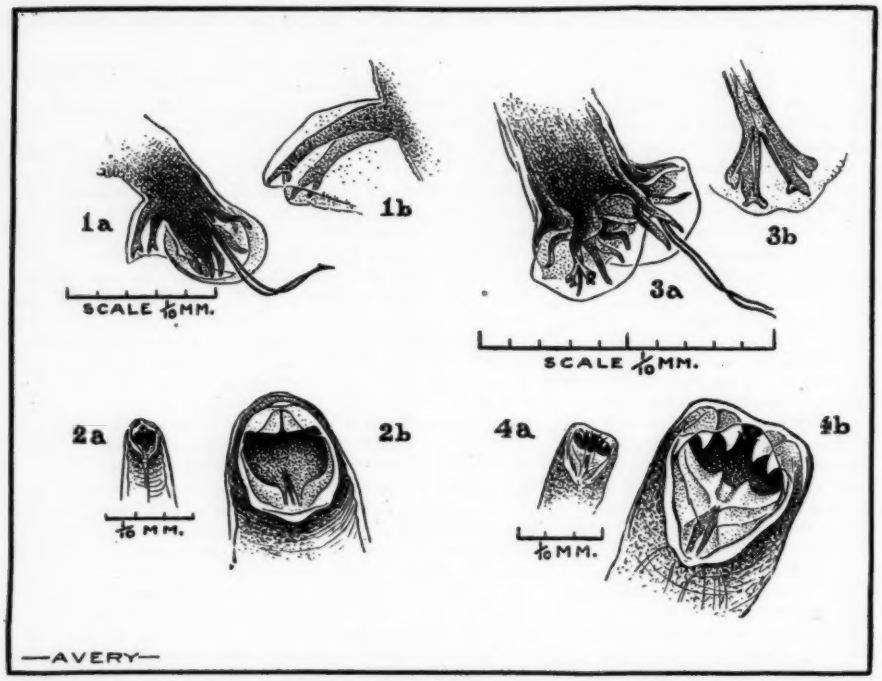

Fig. 1a.—Copulatory bursa of *Necator americanus*, showing the deep cleft dividing the branches of the dorsal ray and the bipartite tips of the branches; also showing the fusion of the spicules to terminate in a single barb. Scale 1/10 mm. Fig. 1b.—Branches of dorsal ray magnified.
Fig. 2a.—The buccal capsule of *N. americanus*. Fig. 2b.—The same magnified.
Fig. 3a.—Copulatory bursa of *Ankylostoma duodenale*, showing shallow clefts between branches of the dorsal ray and the tridigitate terminations. Spicules hair-like. Fig. 3b.—The dorsal ray magnified.
Fig. 4a.—The buccal capsule of *A. duodenale*, showing the much larger mouth opening and the prominent hook-like ventral teeth. Fig. 4b.—The same magnified.

The orientation of the posterior end is accomplished with the same ease as that of the anterior extremity by a similar technic.

The student tends to form an idea from the diagrams usually furnished him that the dorsal ray is a conspicuous structure, which is not the case.

If it is desired to determine the location of the vulva in the female this is accomplished with ease by the same gentle pressure on the cover-glass with the tooth-pick, noting thereby the location of the vulva at or near the posterior third for *A. duodenale* and the location near the equator, but in the anterior half, for *Necator americanus*.

On applying a cover-glass to a freshly passed worm in salt solution on a slide, it will be found easy to cause the worm to roll about its long axis by gently manipulating the surface of the superimposed cover-glass with an ordinary wooden toothpick. This manipulation can be readily carried on while the specimen is examined on the stage of the microscope with a 2/3 inch objective.

By proper adjustment of the diaphragm the proper amount of light can be obtained. In a few seconds one can so orient the worm as to have a direct view of the mouth-opening.

Another point of difficulty is that most of the illustrations in the various text-books are too diagrammatic and unlike what one actually sees under the microscope.

A point about which there is apparently some doubt is as to the appearance of the spicules in *Necator americanus*. The majority of text-books give the idea that there are two spicules, which proceed separately to terminate in barbed terminals.

From a careful examination of numerous specimens I have invariably found the two spicules to fuse at the terminal endings and to possess but a single barb like a fish-hook, as shown in Figure 1a. The spicules of *A.*

duodenale, on the other hand, proceed as separate hair-like processes.

This observation as to the termination of the spicules of *N. americanus* has been verified by others to whom I have demonstrated this point.

Should it not be convenient to examine the specimens when fresh the following procedure will give results equally satisfactory. Furthermore, after an experience with lactophenol solution of about two years I can recommend it for small trematodes as well as nematodes. In fact, it will even clear a large nematode such as *Ascaris lumbricoides* so that the anatomic structures are sharply brought out and with only slight shrinking.

The formula for lactophenol as given in Braun and Lühe is:

Lactic acid	1 part
Phenol (cryst.)	1 part
Glycerin	2 parts
Water	1 part

The specimens should be fixed in 2 per cent. formaldehyd solution for from two to twelve hours according to the size of the worm. It is then placed in lactophenol diluted with an equal quantity of water. Subsequently the specimen is transferred to full-strength lactophenol.

The hookworm can be kept permanently in a bottle of lactophenol and the orientation with the pressure of a wooden toothpick carried out as with fresh specimens.

If desired, permanent mounts can be made by ringing the cover-glass with gold size.

INTESTINAL PARASITES IN THE SOUTH

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With the advent of the Rockefeller Sanitary Commission there has been an awakening in the search for parasitic causes of disease, particularly in regard to those parasites which find lodgment in the intestines. Some of the results of this work are more or less surprising as they indicate various parasitic infestations which are confined to somewhat limited localities, or may be carried by the hosts to various parts of the continent. A person who is a native of the Southern states, or who has resided in them but a short time, may admit and harbor some organisms and carry these unrecognized into a far country.

These parasites, few or numerous, may simulate, by their varying effects on the individual, various abdominal or systemic conditions, and cause considerable anxiety or damage if their presence is not appreciated.

That intestinal parasites are common among certain classes in the North was shown by Rosenberger, who, on examining the stools of 1,280 patients in the Philadelphia General Hospital, found 170 to be harboring parasites. Ten different parasites were encountered, single infestations existing in 147 cases.

The therapeutics of intestinal parasites is still quite incomplete, as is the knowledge of the pathologic effect caused by some of them. Some parasites do not yield readily to the present treatments employed, while with others the adopted medication gives irregular effects or incomplete returns. It may be safe to assume that no live animal is of any great benefit to the intestinal tract when harbored therein, yet there are some which have not made their pathologic significance manifest.

The appended records represent, as far as available to me, the examinations made in the state laboratories in the Southern states, exclusive of Alabama, Louisiana, South Carolina and Texas. The figures represent the examinations made during 1911 and the first quarter of 1912, with some exceptions. The field directors of the Rockefeller Sanitary Commission, working in the various parts of the states, have made many thousands of microscopic examinations (90,724 in 1911), but since it is not customary for them to report the infestations other than those caused by the hookworm, their results are not herewith included.

To obtain figures which would be as full and representative of state conditions as possible, all the figures available were included. Some state laboratories are employing larger forces to develop as a special feature the parasitic work than are others in which these examinations are but a part of the routine work. Some laboratories have been established for years, while in other states such clinical necessities are but new innovations,

TABLE 1.—SUMMARY OF THE INTESTINAL PARASITES REPORTED

Total examinations reported		62,786
Total showing hookworm infestation		11,147
Percentage of hookworm infestation		17.7
Percentage of infestation by other parasites		6.5
	Number Found.	Ratio to Other Parasites. Per Cent.
Necator americanus	11,147	73.13
Ascaris lumbricoides	2,339	15.34
Hymenolepis nana	1,004	6.59
Trichocephalus dispar	551	3.62
Strongylus intestinalis	119	.79
Oxyuris vermicularis	72	.47
Tænia saginata	10	.06

TABLE 2.—RATIO OF PARASITES FOUND

	Arkansas	Florida	Georgia	Kentucky	Mississippi	No. Carolina	Tennessee	Virginia
Necator americanus	94.5	41.6	94.7	40.9	90.9	82.9	47.1	65.7
Ascaris lumbricoides	2.7	7.3	1.9	42.8	1.3	17.9	34.4	26.3
Hymenolepis nana	1.1	39.6	2.8	.9	3.7	5.6	5.0	3.1
Trichocephalus dispar	.3	10.6	.1	15.4	..	3.1	8.6	3.2
Strongylus intestinalis	.7	.8	..	..	15.0	1.1	.2	..
Oxyuris vermicularis	.3	1.0	.2	..	.4	..	2.6	.9
Tænia saginata	..	..	..	..	.4	.03	1.1	..

and hence are less widely called on by the general practitioners.

To publish the number of examinations made by the various laboratories, or to show the exact number of parasites discovered, would be an obvious injustice to some laboratories as the figures would be misleading in the intent and purposes for which the laboratories are founded. Hence for purposes of comparison, only ratios are presented. Apparently no attempt is made by the laboratories to distinguish the ankylostoma. If any have been seen they have been classified with the necator.

Pinworms (oxyuris) were formerly accepted as being extremely common, and dwarf tapeworms (hymenolepis) were regarded as rare. These theories are not borne out by the examinations.

There is a wide variability in the prevalence of the parasites, other than the hookworm, in the various states. Kentucky reports that 15 per cent. of all parasites found are trichocephalus, and Georgia, 10 per cent., yet they are uncommon or not found in other laboratories. One field man found them quite abundant in one locality in

Southern Mississippi. Ascaris is frequently seen in North Carolina, Virginia and Kentucky, but to the southwest of these states it is only occasionally encountered. Strongyloids are common in Mississippi, but are rare or not seen in other laboratories.

The flagellate infusoria are undoubtedly occasionally seen, but would be more frequently noticed if the higher-power objectives were employed. For practical work only the low-power lenses are used; hence the smaller organisms, including amebas, are frequently overlooked. The infusoria are not usually reported. In the Mississippi laboratory, the paramecium *Balantidium côli* was found four times. The flagellates *Lamblia intestinalis* and *Cercomonas hominis* were found once and twice, respectively.

Trematodes are undoubtedly rare in the Southern states, not being reported as seen and recognized in any of the examinations. In the Mississippi laboratories, a fluke egg was seen once, but was not found in this specimen again. This same patient, a Syrian woman, was infested with a parasite whose eggs could not be identified, but bore a close resemblance to the genus *Hymenolepis*. She was given treatment and all adult parasites lost. This same laboratory received two small flat worms which were lost in the mail before being identified.

Myiasis is perhaps quite common, but owing to the ease of extracorporeal fly contamination, there is a hesitancy about reporting the cases. Among many supposed cases received at the Mississippi laboratory only five or six are accepted as being intestinal myiasis. Two were by larvæ of the sarcophagæ, two by muscæ, and the others not identified. Five cases of myiasis are reported from Kentucky. A gastropod, obtained from the intestines of a young man, can scarcely be accepted as a parasite.

The finding of amebas is not included in the reports. In the Mississippi laboratory eleven examinations were made for the diagnosis of suspected amebiasis; the *Entamœba histolytica* was found twice. In both instances the stool was green, liquid and contained mucus.

Multiple infestations are not usually noted and reported because the examination of a specimen is discontinued after the first few ova are encountered. Prolonging the search would markedly increase the number of multiple infestations recorded.

THYROID EXTRACT IN NEPHRITIS

A PRELIMINARY STATEMENT OF A NEW AND EFFECTIVE METHOD OF TREATMENT

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CASE 1.—In March, 1909, J. E. P., a man aged 48, 6 feet in height, well proportioned and weighing 180 pounds, consulted me because of a general depression and inability to work, either mentally or physically. He had been in failing health for several years. He complained of headache, shortness of breath and at times difficult vision. There had been a progressive loss of weight for five years; previous to the beginning of this illness, it averaged from 200 to 220 pounds. The patient was conscious of an irregular action of the heart, which, he said, had developed within the past six months; it was this irregularity, together with shortness of breath on even moderate exertion, for which he sought relief. There was some irritation of the bladder, especially at night, but no prostatic trouble. His general appearance gave one the impression of a once active, energetic business man who was failing physically and who had lost courage.

External examination disclosed a cystic goiter. The neck measured 19½ inches in circumference. This had been present for sixteen years. The heart-apex was diffused and outside of the nipple-line in the sixth interspace. Blood-pressure was 190 mm. Hg. In the fingers of the extended hand there was a slight tremor. There were no other symptoms indicative of hyperthyroidism. The physical examination was otherwise negative. The urine contained 4 per cent. albumin and was loaded with granular and hyaline casts. The chlorids were diminished and the reaction for indican was positive.

This case represents a type seen frequently by every practitioner in the course of his work, and medicine has, heretofore, had little to offer in the way of a direct cure since Richard Bright of England, in 1827, first published his paper which described the disease.

As this article is but a preliminary statement and the subject is so vast, I purpose to report here but two cases, leaving for the future a more extended report which will contain all that I have learned regarding the treatment of this disease so far. Before doing this, I am sure the following will be granted: Here was a man in the prime of life and of large business interests, and about all we had to offer him was a diagnosis followed by some advice to limit his business activities, to go to a mild climate for the winter and to follow a prescribed suitable diet. Anything further in the way of treatment must be done symptomatically. I told this man, therefore, that as long as he attended strictly to the business of conserving his health in the future, he would prolong his life with a reasonable measure of comfort just to the degree that he did so. But we all know that such advice is not scientific. It is merely a sentence to these individuals to go out into life and grasp at the straws of hope that finally they may find something in the regular or irregular practice of medicine which will stave off the evil day of total incapacity with its measureless depths of mental and physical suffering.

All that I did at first for this patient in the way of treatment was to consider his high blood-pressure. For this I prescribed small doses of potassium iodid and 1/100 grain of nitroglycerin every two hours. I really had nothing, as I have said, to offer him for his nephritis.

In thinking of this patient and his physical condition after he had gone home, and in casting about for a possible form of treatment that had more to offer than what I had already done, I thought of a possible relationship between the kidney findings and the greatly enlarged cystic thyroid. It was easy for me to think of this possible relationship because of my previous work in reference to the internal secretion of the hypertrophied prostate gland as a cause of certain distressing symptoms in middle-aged and old men.[1] It occurred to me that although hyperthyroidism had a very extensive literature, the subject of hypothyroidism lay in an almost unknown field in the realm of pathologic physiology. I reasoned that this man's thyroid gland, greatly damaged as it was, was not giving him the required amount of its secretion. I believe, by the way, that there is a direct relationship, embryologically, between the thyroid gland, the adrenals, the kidneys and the sexual system; just what I believe this relationship to be, however, is not the purpose of this article to discuss.

On the basis, then, of the greatly enlarged thyroid gland and a coincident nephritis, I prescribed 20 grains of thyroid extract a day, in four doses, for a week, and

1. Percy, J. F.: Psychic Aberrations Associated with the Diseased Prostate Gland, Illinois Med. Jour., November, 1908; abstr. in THE JOURNAL A. M. A., Jan. 9, 1909, p. 166; Phrenitis Prostatica, ibid., July 2, 1910, p. 19; editorial, ibid., Dec. 12, 1908, p. 2064.

30 grains in six doses for another three weeks, when the patient was to report again. When he returned at the stated time, I found the whole symptom-complex changed for the better. The general appearance of the man was immeasurably improved. He had lost the appearance of being sick. But what was of greater importance, a careful examination of the urine, chemically and microscopically, showed neither albumin nor casts. (I have learned that it requires from four to six weeks and from 20 to 30 grains of thyroid extract a day to cause a total clearing up of the urine in the average nephritic.) At this second visit, in addition to the disappearance of the pathologic condition in the urine, the blood-pressure was 170 mm. Hg. The heart apex-beat was also better defined and was just inside the nipple-line and well within the fifth interspace; it was also regular in action, with less impulse over the precordia and a better radial pulse. Altogether, the heart was in much better condition than at the patient's first visit. The neck measured 18½ inches.

The treatment was continued and the patient directed to report again in two months. This he did in July, 1909, and my notes record the following:

Urine normal. Heart much better. Blood-pressure 160 mm. Hg. Goiter measures 17½ inches. Improved general health.

I had reports of this case by letter occasionally for another six months, when the patient visited me for another examination in January, 1910. My notes contain the following record made at this visit:

Urine normal in every way. General physical condition good. No irregularity of heart, and stronger. Blood-pressure 150 mm. Hg. Neck 15¾ inches.

I did not see the patient again during 1910 or 1911, but heard from him frequently by letter. I asked him to see me again Feb. 19, 1912, and examination showed that he had held the improvement recorded at his last visit. At this visit I advised that he discontinue the thyroid treatment. For the purposes of this report, I examined him again June 25, 1912, and found that his urine was normal and the blood-pressure was 145 mm. Hg; he had resumed full charge of his affairs and hope had once more resumed its beneficent sway. A letter, dated Oct. 15, 1912, reports that he has remained well, that he is in better general health than for many years, and that his weight has increased to 220 pounds. In addition, a sample of urine from a twenty-four-hour specimen was found to be normal.

It is true that one swallow does not make a summer, but I now have the records of thirty-five patients taken as they come, since this first case; all have responded in the same remarkable way and none has died.

CASE 2.—The second case which I wish to report is that of Mrs. J. C. D., aged 37, American, housewife, weight 90 pounds, mother of three children; labors had been normal. The patient, who consulted me in May, 1912, had begun to fail seven months previously. She complained of stomach distress half an hour after eating, nausea and at times vomiting with eructation of gas. In addition, she had frequent headaches, with the pain chiefly in the top of the head. Bladder irritation necessitated leaving her bed from three to five times each night. Menstruation was regular, with menorrhagia, which averaged twenty napkins a day. The flow lasted only two or three days. The patient was constipated and had lost nearly 30 pounds in weight during the last three years. She was very nervous.

Physical examination revealed a tall, thin woman, evidently physically and mentally depressed. Temperature at 3 p. m. was 99.6 F.; hemoglobin, 68; blood-pressure, 180 mm. Hg; lungs negative. The heart showed dulness to the nipple-line. There were presystolic and systolic murmurs at the apex, with accentuated pulmonic and second aortic sounds; the apex-beat was strong, and the radial pulse weak. Peristalsis of bowels was marked, especially over the left side of the abdomen; there was chronic appendicitis. The great curve of the stomach was on a level with the umbilicus. The retroperitoneal glands were enlarged. The uterus was low in the pelvis, subinvoluted, retroverted and painful. There was double laceration of the cervix, which was greatly enlarged and eroded. The perineum was badly torn. The right kidney was loose. The total quantity of the urine in twenty-four hours was 32 ounces; specific gravity, 1.008; urea, 4 grains; total solids, 288 grains, albumin, 0.125 per cent.; a few granular casts were present. The thyroid gland was not palpable.

This woman was put in the hospital for two weeks on a modified rest-cure plan of treatment. She showed great general improvement, and the urinary findings became normal with the exception of the total solids; these did not rise above 700 grains in the twenty-four hours. At the end of the two weeks the appendix was removed, retroversion was corrected after the method of Andrews and the gall-bladder was drained for cholecystitis. The gall-bladder proved to be unhealthy after the abdomen was opened, and was drained. The hypertrophied and lacerated cervix and perineum were repaired. The patient was on the table one hour, and was returned to bed in good condition. Uneventful convalescence followed except that the patient persistently complained of pain in the top of the head. This was attributed to her neurasthenia. She left the hospital in three weeks, apparently improved, except for the headache. Urine contained less than 0.125 per cent. albumin, and a few hyaline casts. Blood-pressure was 180 mm. Hg. I advised constant use of nitroglycerin, 1/100 grain every two hours. I did not see this patient again until September 5 of this year at her home in Abingdon, Ill., with her physician, Dr. W. S. Bellwood. The patient was delirious at times. Her chief complaint was of terrific headaches. Her general appearance was bad. Blood-pressure was at this visit as follows: systolic, 210 mm.; diastolic, 165 mm. The patient was sent to the hospital. A twenty-four-hour specimen of urine showed the following: acid reaction, specific gravity, 1.018; albumin by quantitative test, 6 per cent., many granular and waxy casts, and also pus cells; chlorids were deficient (Häser); indican negative; total solids, 288 grains.

The woman was put on six 5-grain tablets of thyroid extract in each twenty-four hours. In three days she was in partial coma with urinary incontinence and involuntary bowel movements. There was moderate edema of the feet and legs, with slight puffiness of the face and hands. Whenever there was any improvement from the condition of coma she would complain bitterly of the headache. Her friends were gathered at the hospital expecting an early death. Thyroid extract, increased to 40 grains in the twenty-four hours, was administered in solution by catheter through the nose. The semicoma persisted for a week, when she rapidly passed into a condition of wild, almost maniacal delirium, requiring the constant use of the restraining sheet for two weeks. No urine could be obtained during this time except by catheter.

September 17. A single specimen of urine was obtained. This contained 5 per cent. of albumin and a much smaller number of granular casts than the previous specimen.

September 25: Albumin was 4 per cent. with no granular casts.

September 28: Albumin was 3 per cent. and no casts. The general condition was improved and the restraining sheet was required but occasionally.

October 7: Albumin was 2 per cent., and an occasional granular cast after persistent search.

October 11: Albumin was 2.25 per cent.; no casts.

October 17: Albumin was 1.5 per cent.; no casts.

October 23: Albumin was 0.5 per cent.; no casts.

October 25: The total quantity for twenty-four hours was 58 ounces; total solids, 701 grains; color, straw; transparency, turbid; reaction, acid; specific gravity, 1.010; albumin, quantitative test 0.5 per cent.; sugar, none; urea, 4 grains; micro-

scope, occasional pus cell; chlorids (Häser) normal; indican, negative. Thyroid extract was continued.

There has never been an elevation of temperature. As the albumin and casts disappeared from the urine, the patient's general condition improved, both mentally and physically, and the restraining sheet was no longer necessary. At present (Oct. 25, 1912), the patient gives every evidence of a rapid convalescence. Her blood-pressure, it should be added, came down in unison with the improvement in the urinary findings. The last recent record shows 130 mm. Hg. It should have been stated before this that this patient had an advanced albuminuric retinitis, which had markedly reduced her field of vision. This condition was also improved immeasurably, as shown by ability to count the fingers correctly over a much larger ocular field. The headaches are also no longer complained of. The patient is now out of bed and will soon leave the hospital.

Eye findings by Dr. R. C. Matheny, Galesburg, Ill.: Oct. 25, 1912: "Ophthalmoscope shows marked evidence of albuminuric retinitis in both eyes. In the left eye the destructive changes are confined chiefly to the central part of the fundus but show very marked changes in the retina with great destruction of the retinal tissue. The changes are not confined to the macular region but extend for some distance in all directions. In the right eye the changes are very much more extensive and not only is the retina more or less destroyed on the posterior wall of the fundus, but changes have taken place in retina far to the temporal side of the disk and extending in all directions almost to the equator. Her field of vision is not very much limited for white light. I was unable to get it for colors. There was no evidence of present or recent hemorrhage in either eye."

I am sure that this woman would, ordinarily, be regarded as suffering from a contracted or sclerosed kidney. There must be in this case actual destruction of the renal tissue; but that the thyroid gland feeding is responsible for the improved urinary findings and the general physical improvement in the two cases here reported, I am convinced admits of no contrary argument. I regret that it seems necessary in this preliminary paper to state my case in favor of the undoubted value of thyroid feeding in nephritis in this cursory way.

I should add, perhaps, in passing that when high blood-pressure is due to a pathologic hypertonus, in patients under 60 years of age, I add to the thyroid treatment 1/100 grain of nitroglycerin every two hours. In those past 60 years of age, I add to the thyroid and nitroglycerin about 40 grains of potassium iodid in the twenty-four hours. In using this treatment I have as a rule made no change in the ordinary diet of these patients.

After my faith in this treatment of nephritis had reached the stage of conviction, it dawned on me that, with the almost universal use of the thyroid gland in so many widely divergent conditions, some investigator had also certainly made use of it in Bright's disease and learned of its value. With this in mind, I asked the Surgeon-General's office at Washington to search the literature, with the result that only one contribution was found that had any bearing on the use of the thyroid gland in the conditions under discussion.

In the *Archiv für experimentelle Pathologie und Pharmacologie* (1897, xxxix, 273), I found a most valuable and interesting article by G. Diaballa and Von Illyés entitled, "Researches on Metabolism in Bright's Disease While Feeding Thyroid Preparations." This experimental work, done fifteen years ago, has evidently been buried in this special journal all these years. The purpose of the authors seems to have been simply to demonstrate that any individual suffering from Bright's disease — and many other diseases — would, if given the extract of the thyroid gland, show an increased diuresis and an increased excretion of urea. Their experiments showed that this was true also in the healthy adult, but it was not true when this substance was fed to the young. Nowhere in the published record of their work do these investigators seem to have conceived the idea that the administration of the thyroid gland would favorably influence the protean progress of the symptom-complex which has been designated so long as Bright's disease.

In a recent work on the "Theory and Practice of Thyroid Therapy" by Waller of England, no mention is made of the value of this treatment, either in Bright's disease or in the so-called toxemia of pregnancy. Shortly after the use of the thyroid extract in my first case of nephritis, I began using it in the not infrequent cases of toxemia of pregnancy which I saw in consultation. It has been observed for many years that the pregnant woman who did not develop an enlarged thyroid during the period of gestation was in imminent danger of eclampsia during the progress of her labor. Here too I was gratified to find that the active administration of the thyroid gland (30 to 40 grains a day) seemed to exert the same favorable influence that I had already observed in other forms of nephritis. I have had no experience with this treatment in the nephritis of children.

At present I am carrying on a series of observations as to the permeability of the kidney as shown by the phenolsulphonephthalein test in the various forms of Bright's disease as they are classified by the pathologist and clinician to-day, and the influence of thyroid administration in thus increasing the working capacity of the damaged kidney. These experiments are intensely interesting, and I trust, when published, will be of permanent value.

I am quite certain that, speaking generally, we can now add nephritis to the large list of cases brought to the internist suffering from hypothyroidism. This suggests another inquiry: Is nephritis in its various forms merely another phase of myxedema? In this large class (hypothyroidism) other factors will be found, which I hope, in a future paper, to show can also be greatly improved or cured when the combined physiology of the internal secretions is interpreted in the light of the normal and abnormal work of the glands which have an internal secretion other than that of the thyroid gland.

I am convinced that the improvement frequently observed in the downward progress of a case of nephritis as ordinarily treated is not due to the various methods used. The improvement can be best explained on the assumption that Nature unaided, by some means yet unknown, has changed an undersecretion from the thyroid gland to a normal or overnormal production from that gland, and to this is due the improvement sometimes observed under widely different methods of treatment. I have selected from my records the two cases reported above for the reason that the first one represents a good average as they are usually seen by the physician. The second belongs to the class of patients who have died heretofore regardless of the treatment employed.

In closing permit me to repeat that if the extract of the thyroid gland as found in the shops is given in full doses to the average nephritic the urine will increase in quantity. The urinary solids will gradually return to normal, the albumin and casts will disappear in from four to six weeks, the blood-pressure will be reduced, and the local and general symptoms, grouped under the terrible name of Bright's disease, will vanish.

147 South Cherry Street.

MUSCLE GROUP ISOLATION IN THE TREATMENT OF SPASTICITIES AND ATHETOSES

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"Muscle group isolation" is a term applied to a method devised by Schwab and Allison[1] for the treatment of athetoses and spasticities. "This implies the isolation of the muscle or group of muscles which are at fault in the production of contracture, deformity or athetosis." The isolation is accomplished by the injection of 80 per cent. alcohol into the nerve supplying the muscle or group of muscles. A paralysis of the physiologically stronger group of muscles results and at this point physiologic exercises and educational methods are made possible. Schwab and Allison have used this method in the treatment of athetoses, spasticities and deformities which follow anterior poliomyelitis and tic. Their contentions are that there is, first, a paralysis of the overacting muscle or group of muscles and a disappearance of spasticity and athetosis and, second, a gradual return of function in the paralyzed muscles, without a recurrence of spasticity or athetosis. If both of these contentions could be sustained by further work, this procedure would assume great importance. There

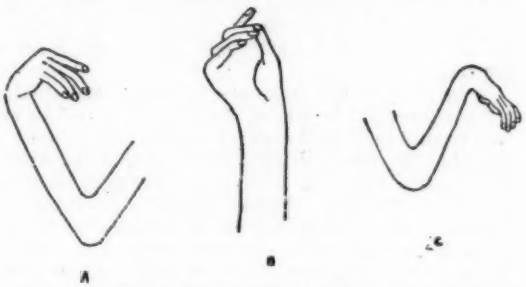

Fig. 1.—Deformity in Case 1, sketched from a photograph. A, before operation; B, immediately after operation; C, eleven months later.

are, however, no definite data relative to the actual amount and strength of alcohol necessary to be injected into the nerve to induce temporary paralysis only. The lasting paralysis and trophic disturbances resulting from treatment of sciatica by injection of the sciatic nerve with alcohol, and the knowledge of the cicatricial formations resulting from alcoholizations of nerves, emphasize the importance of determining whether function reappears or not.

The following six cases are reported to contribute to the data relative to the permanency of the paralysis and the return of spasticities following the employment of this procedure.

CASE 1.—H. J., a woman, aged 17, with spastic quadriplegia and the mentality of a child of 2. March 25, 1910: "The patient is a microcephalic idiot and has nystagmus and internal strabismus of left eye. She shows marked spasticity of all extremities; active movements are possible only in the left upper extremity and are here interfered with by athetosis. There is a marked deformity of the left wrist evidenced by a marked flexor contracture; the legs are flexed and adducted. Passive movements are resisted throughout; the deep reflexes are all exaggerated; there is a double Babinski."

March 26, 1910, the ulnar and median nerves of the left side were injected with 80 per cent. alcohol. There was an immediate disappearance of spasticity and athetosis. The contracture disappeared and the wrist assumed a normal position. April 7, 1910: There was complete anesthesia to touch and pain over the area supplied by the ulnar and median nerves. April 21, 1910: There was a slight return of sensation to pain on the outer surface of the thumb. May 13, 1910: Both sides of the thumb, the little finger and the index-finger showed diminution of anesthesia. Sept. 26, 1910: There was seen a slight return of spasticity and deformity but no return of motor function. There was marked atrophy and reaction of degeneration in the muscles supplied by the ulnar and median nerves (Fig. 1).

CASE 2.—H. L. B., a boy, aged 11, with spastic paraplegia and athetosis of the upper extremities, and the mentality of a child of 3. He could not talk. April 2, 1910: "The patient is a microcephalic idiot and possesses normal active movements in the upper extremity except for athetosis. Passive movements meet with considerable resistance. The lower extremities show a crossed-leg deformity. The left leg is extended; right is flexed to an angle of 100 degrees. The patient can flex and extend both legs but abduction is impossible. The deep reflexes are exaggerated and there is a double Babinski."

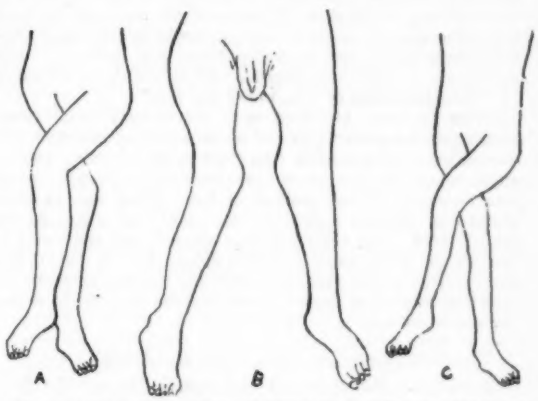

Fig. 2.—Case 2. A, before operation; B, immediately after operation; C, ten months later.

April 3, 1910: Both adductor nerves were injected with 90 per cent. alcohol. There was an immediate disappearance of the adductor spasm; both legs were now in position of slight abduction. Extreme passive abduction was possible. May 5, 1910: The condition was still the same. July 3, 1910: There was a slight return of spasticity. Feb. 1, 1911: The position of the legs had gradually reverted to the position existing prior to operation. Owing to the patient's poor mentality it was impossible to teach him to walk (Fig. 2).

CASE 3.—F. M., a man, aged 20, with spastic paraplegia. April 2, 1910: "There is present a spastic paraplegia and an adductor spasm more marked on the right side. Forcible abduction separates the knees but 3 inches. There is a double pes planus. Speech is limited in extent and is somewhat paretic. Mentality is equivalent to that of a child of 3. The upper extremities are slightly spastic."

April 13, 1910: The left obturator nerve was injected with 80 per cent. alcohol. The right obturator nerve was severed. There was absolutely no change noted in the spasticity or contracture of either side.

CASE 4.—M. M. D., a man, aged 24, with spastic quadriplegia. May 28, 1910: "The patient has a kyphoscoliosis to the left with extreme deformity of the spine. There is a cross-legged deformity of the extremities. The legs are flexed on the thighs; the right to an angle of 90 degrees, the left, 60 degrees. The forearms are flexed on the arms, the wrists on

1. Schwab, S. I., and Allison, N.: The Surgical Treatment of Athetosis and Spasticities by Muscle Group Isolation, Jour. Nerv. and Ment. Dis., 1909, xxxvi, 449.

the forearms. Passive movements are markedly resisted and athetoid movements make their appearance, especially on the left side."

March 29, 1910: Both obturators and the ulnar and median nerves of both sides were injected with 80 per cent. alcohol. The left leg showed disappearance of spasticity. The right was unaffected. The deformity of the left wrist had partially disappeared. Athetosis was not present. May 6, 1910: The patient developed an acute pulmonary tuberculosis and died, having shown no change since the operation.

CASE 5.—M. C., an idiot girl, aged 17, with spastic quadriplegia. March 25, 1910: "Both forearms are flexed on the arms, at an angle of 80 degrees. The wrists are flexed on the forearms; the fingers are flexed and the thumbs are adducted. The deep reflexes are exaggerated. She has but slight active movements in any of the extremities. The contractures of the upper extremities are marked." March 26, 1910: The median and ulnar nerve of right side and the median nerve of the left side were injected with 80 per cent. alcohol. There was no disappearance of the deformities. It was noticed, however, that on the right side resistance to passive pronation was less marked than on the left side. Aug. 1, 1910: There was noticed an atrophy and reaction of degeneration of the flexor group of muscles of the right side.

CASE 6.—M. C., a girl, aged 18, with spastic quadriplegia. March 4, 1910: "The patient is a microcephalic idiot. The left upper extremity possesses normal active movements. The right forearm is flexed on the arm and the wrist on the forearm. The fingers are flexed and the wrist is supinated. The lower extremities are markedly flexed and adducted. The appearance is difficult to describe and at a distance seems to be a conglomeration of legs, knees and feet."

March 10, 1910: Operated on by Dr. D'Orsay Hecht. Both obturators and the median and ulnar nerves of the right side were injected with alcohol. The right upper extremity showed slight relaxation but no disappearance of deformity. There was no change in the position of legs. There was an anesthesia over the area supplied by the ulnar and median nerves. May 1, 1910: The anesthesia was disappearing and was limited to the little finger and ring-finger. Feb. 1, 1911: The same condition still existed. There was present, however, the slightest amount of active movements and reaction of degeneration is present.

The results may be summed up as follows:

In Case 1 the athetosis and spasticities of the forearms and wrists disappeared immediately after the injection. Eleven months following the operation there was a return of the spasticity with no return of motor function. There was also present an atrophy and reaction of degeneration in the muscles supplied by the ulnar and median nerves. In Case 2 the cross-legged deformity immediately disappeared and ten months after operation was again present. In Case 3 there was no change in the spasticity of the adductors, despite the fact that one of the obturator nerves was severed. In Case 4 there was a disappearance of spasticity in the left adductors and partial disappearance of the deformity of the left wrist. Cases 5 and 6 showed little change, but Case 6 showed reaction of degeneration and atrophy in the right flexors five months after operation. In a case in which the ulnar and median nerves of a patient of good mentality were treated by an injection of 80 per cent. alcohol for a condition foreign to the subject, there was complete loss of function with marked atrophy in the muscles supplied by these nerves and reaction of degeneration one year after operation.

From these results we would offer the following deductions:

It is extremely doubtful if we can be assured of return of motor function in every case subjected to this treatment, and it is preferable to suffer with athetosis and possess function than to be relieved of the athetosis and have function disappear. There is no certainty that the spasticity will not recur after some time, and from our cases it would seem that the spasticity will probably reappear. In cases in which shortening of the contracted muscles has occurred the procedure is valueless unless supplemented by other surgical measures, as tenotomy, etc.

In our opinion there is but one indication for the procedure in the treatment of spasticities, namely, a cross-legged deformity due to spasticity of the adductor groups of muscles occurring in a child, who, on account of the deformity, is unable to learn to walk. It may be possible in such instances to educate the child to walk during the time that the deformity remains corrected and, in event of the return of the spasticity, the ability to walk, although hampered by the resulting deformity, may remain.

We would particularly warn against the attack by alcohol of any nerve possessing important motor functions, as the ulnar, median, etc.

SUGGESTIONS FOR OPERATION AND AFTER-TREATMENT OF EMPYEMA

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The treatment of pus in the pleural cavity differs from the treatment of pus elsewhere on account of certain anatomic, physiologic and pathologic factors. The etiology of the empyema is important as having a definite bearing on the pathologic picture and hence on the treatment.

A majority of the cases seen in infants and children are pneumococcal in origin. In general, it may be said that in such cases fluid does not tend to accumulate with anything like the persistency that is seen in the streptococcal cases, and that there is not the permanency of pathologic changes. Hence, generally speaking, the treatment of the cases need not be as radical as in older subjects in whom there are more often other etiologic factors. In the latter classes, in either pneumococcal or streptococcal cases, but especially in the streptococcal, which predominate in the older subjects, there is more tendency to the accumulation of fluid and a definite tendency to greater pathologic changes.

The staphylococcal, putrefactive, influenzal infections, though showing minor differences, may, as far as treatment is concerned, be classed with streptococcal infections. Tuberculous infections are treated differently and on an entirely different basis.

VARIOUS FACTORS

Anatomic Factors.—Collections of pus in the pleural cavity have for one boundary a non-collapsible wall. The other boundaries usually consist at first of slightly inflamed pleura capable of being expanded by underlying lung and of filling the dead space after evacuation of the pus. Hence, were collections of pus not associated with greater changes in this latter boundary, closure and cure would be rapid and inevitable after evacuation. In the absence of the power of stretching of the pleura a thick-walled box-like cavity exists and there is, as a result, a persistent sinus until the dead space is filled, which may never be.

Physiologic Factors.—The elasticity of the lung and the rigidity of the thoracic wall operate to form a negative pressure in the pleural cavity. After a pneumothorax is formed (as in the operation for the evacuation

of the pus) the lung pulls away from the thoracic wall and tends to form a larger cavity than existed before the operation. With this there is associated a certain definite amount of shock, sometimes so severe as to be alarming. The consequences of the artificial pneumothorax may be overcome by the application of negative pressure to the pleural cavity or of positive pressure to the lung.

Pathologic Factors.—On the pathologic changes in the pleural cavity lies the greatest weight in determining the differing treatment of pus in the pleural cavity and elsewhere. Inflammation of the pleura is primary, not secondary, to the accumulation of pus. Pleural inflammation acts similarly to inflammation elsewhere, except in the event of non-consolidated lungs, when there is the added insult of rhythmic motion. The result is merely what should be expected. Grossly, there is thickening of the pleura because of the organization of the fibrinous deposits; there is union, in various areas, of opposing surfaces of parietal and visceral pleura due to inflammatory reaction and, associated with this, an outpouring of seropurulent fluid. The result is an irregular cavity bounded by thickened pleura, intersected by fibrous bands and areas of pleural adhesion and containing pus. The final result may be a pleura several centimeters in thickness, non-expansile, possibly calcified, binding the lung in a leathery jacket. The cavity may be honeycombed with partitions of varying density and the contents may be thickened inspissated pus or purulent fluid containing floating masses of fibrin which, as in one case I had several years ago, may be as large as the palm of one's hand and about 5 cm. thick.

All these changes are present to but a slight degree at first. Later the cavity more nearly resembles a rigid-walled box with little or no power to collapse. In this event dead spaces exist which are filled with difficulty and until they are filled a persistently discharging sinus exists. In addition, the presence of leathery masses of fibrin which frequently act as foreign bodies diminishes the tendency for the sinus to heal. These masses are not present at first; neither is the honeycombed condition of the pleural cavity. Later they may be and very frequently are present.

To attempt drainage of a cavity by the mere insertion of a tube, with such a condition present, is analogous to attempting the evacuation of a multilocular cyst by the same method. Lastly, it must be kept in mind that a pleura once thickened is indelibly stamped; adhesions once formed are long lasting, and lung tissue bound in by heavy investments, however normal it may be in itself, is rendered physiologically "dead" by its non-expansive covering. Likewise it must be remembered that none of these changes is to any extent marked in the early periods of the inflammation.

CLINICAL CONSIDERATIONS

Empyema, if we may judge from statistics, is a very dangerous disease, perhaps 25 per cent. of all cases ending in death if untreated. Complications, such as pyemia, general infection, acute inflammation of any of the serous cavities, cerebral abscess, internal perforation and osteomyelitis, are not infrequent. External perforation or absorption may terminate a case favorably. Before the appearance of either one of these terminations, however, complications may set in. The site of spontaneous perforation may not be dependent enough for clean drainage. Meanwhile, lasting changes have occurred in the cavity, whatever the termination; and should an operation be called for at a late date the condition of the patient may be alarming to a degree.

Finally, when one realizes that added to these dangers are the slower but none the less dangerous sequelæ associated with persistently discharging sinuses so frequently seen in cases which have been allowed to pursue their own course until pathologically the cavities are incapable of closing down on the dead space, such as anemia, amyloid degeneration of various organs, nephritis, hepatitis, the disagreeable ever-present discharging wound or the results of the continuous thickening of the structures within the cavity leading to a drawing in of the chest wall with marked skeletal deformities, one is then inclined toward an operation which will either prevent entirely the appearance of these symptoms and changes or else treat most radically the conditions when once they have appeared.

OPERATIVE PROCEDURES

It has been seen that pathologic changes are slight in infants. Hence, as a rule, the accumulation may be treated as one neither honeycombed nor surrounded by rigid walls. A rapid thoracostomy, under chloroform or a mixed anesthetic, with the insertion of the negative pressure tube, preceded if the condition warrants by a slow aspiration, is all that usually is necessary. In adults or children in whom the reaccumulation of fluid is more frequent and the pathologic changes exist in their most marked form, it is necessary to explore the pleural cavity for several reasons. For this a simple positive-pressure apparatus which may be connected to any air-tight face-mask, as, for instance, on the Gatch gas-oxygen apparatus, is essential, and the gas-oxygen form of anesthesia is the safest and most reliable anesthetic.

Position is of great importance. With one lung compressed by a great effusion and the other hampered by the weight of the patient lying on his "good" side, the chances of enough oxygen being distributed to the blood are slim. I have seen several patients show alarming cyanosis on being rolled onto their normal side and as quickly clear up on changing the position. One patient died immediately after being subjected to this unnatural procedure. The best is afforded by the patient lying partially on the stomach but inclined toward the affected side. Thus easy access is given to the postaxillary line of the affected side.

If the condition of the patient is alarming or dangerous a tentative aspiration should be done under local anesthesia, the pus being slowly withdrawn with a negative-pressure aspirating syringe and bottle and the flow being checked when respiratory distress becomes evident or when the blood-pressure falls more than a moderate amount. If the accumulation is carefully withdrawn without shock, the patient will be in a far better condition to stand the shock of the greater operation a few days later. Occasionally aspiration will cure. But more frequently than not it will merely improve matters temporarily; and one must always take into account the indelible effects of waiting, where cure is merely a chance and the probabilities are that operation will become necessary under the added difficulties of diminished resistance and greater pathologic changes.

Most often aspiration except for diagnosis is not necessary as a preliminary procedure. Under gas-oxygen anesthesia a subperiosteal resection of 2 or 3 inches of rib is performed (seventh rib in the post-axillary line) and a thick aspirator connected with a negative-pressure bottle is gently forced through the pleuroperiosteal layer.

Pus is slowly evacuated with the same care as in preliminary aspirations on very ill patients. When the cavity is partially emptied positive pressure is employed in the lung and after all of the pus that can be evacuated in this way has been removed the aspirator is withdrawn. Positive pressure is still employed in the lung and the opening in the pleuroperiosteal layer is enlarged manually so as to admit two fingers. These are carefully inserted and swept well around the borders of the cavity, if possible, care being taken not to break through any of its boundaries. By this important maneuver partitions and loculi are broken, masses of adherent fibrin are loosened, and bands and adhesions are gently separated. The honeycombed cavity is thereby converted into one single cavity capable of free drainage. When the fingers are removed the results of manipulation are seen. Through the incision freed pus and loosened débris of fibrin flows. In case the lung is incapable of expansion the introduction of a rubber tube, well perforated and connected with the negative-pressure bottle, will remove practically all the débris of pus and fibrin which may not be forced out. Irrigation is to be condemned as a dangerous and unnecessary procedure, although advocated by a few writers. Sudden deaths have occurred from irrigation in not a few cases.

The patient, during the operation, never suffers from the appearance of a complete pneumothorax. During the application of the air-tight sliding drainage-tube (Fig. 1 b), the positive pressure is forced, and, as the flange (Fig. 1 c) is applied to the skin under this pressure and the tube on its outer end is connected with negative pressure, there is constantly a tendency for the pleural cavity to empty itself of its contents through the tube. When the flange is firmly applied and the tube is tightly connected, the positive pressure is removed from the lung and from then on, except for short periods each day, the emptying of the pleural cavity and the approach of the lung to the thoracic wall are brought about

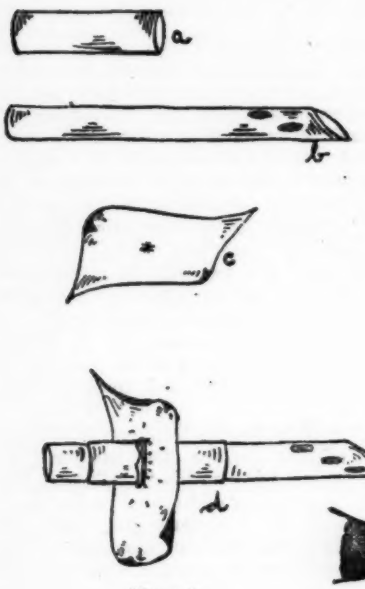

Figure 1.

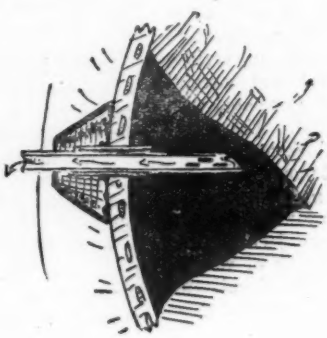

Figure 2.

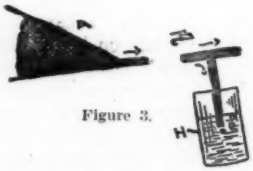

Figure 3.

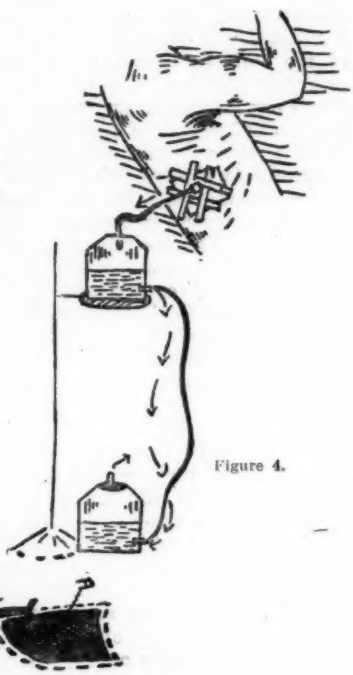

Figure 4.

Fig. 1.—Outer, short rubber tube *(a)* about the size of one's little finger, cut so that it will perforate the thoracic wall and extend perhaps one-half inch beyond on the inside and extend about one inch beyond the outer or skin side; the inner tube *(b)* fits very snugly into the outer tube. This may be accomplished by well oiling the tubes and drawing the inner one through by means of forceps. A very tight fit is easily obtained and is of extreme importance. This tube is long enough to project three inches beyond the inner end of the outer tube and a similar distance beyond the outer end; the flange *(c)* is a small square of thin sheet-rubber about four inches square. A series of quarter-inch cuts are made in the center of this with the point of a scalpel, the cuts all intersecting one another in the form of several diameters in the same circle. The outer tube is drawn through this until the flange rests about an inch from the outer end *(d)*. The flange is thus drawn out in numerous crown-like processes along the outer tube and may then be wrapped snugly with fine silk so that this is an air-tight joint. On the insertion of this combination at operation it is important to wipe the skin with ether thoroughly around the wound, quickly apply the flange to the dried skin and then apply a generous network of zinc oxid, adhesive over the flange, bringing the latter thus in air-tight apposition with the skin.

Fig. 2.—Outer tube in position passing through thoracic wall, flange applied to skin (adhesive not represented) and sliding inner tube projecting through into a collection of pus in the pleural cavity. Inner tube projects also beyond outer end of outer tube and here is joined to the negative pressure-bottle by means of long tube (this tube and bottle not represented here). Ease with which inner tube may be withdrawn without either disturbing the dressings or allowing a pneumothorax to form is seen in the cross-section diagram.

Fig. 3.—Air-tight face-mask (C), bellows (A); a T tube (B) interposed between A and C; A and one arm of the T tube are connected with rubber tubing; the other arm of the T tube is connected with the air-tight face-mask in a similar manner; the perpendicular portion of the T tube is free and affords an escape for the air forced from A to C. As long as this end is out of water pressure at A is not conveyed to C, but as the free end of the perpendicular arm is lowered under water the escape of air through this arm is interfered with, and consequently the pressure at C is increased. With the thorax open the amount of pressure may be gauged by the approach of the lung to the thoracic wall provided that consolidation is not present, and the pressure may then easily be regulated by lowering the tube or withdrawing it from the bowl of water (D). The cross-arm should be about 4 inches, the perpendicular tube about 8 or 10 inches.

Fig. 4.—A simple water-pump which may be improvised in the absence of a negative-pressure bottle equipped with a suction-syringe. The fall of water from one vessel to another creates a negative pressure in the upper vessel and this is in turn transmitted to the cavity with which the latter is connected by tubing.

passively by the suction on the pleural cavity. In detail, the patient is propped up in bed immediately on reaching the ward and a few hours later put in the open air. During the first twelve hours the greatest amount of drainage will occur, but if the bottle is exhausted as often as is necessary there will be a certain small amount of drainage or even more occasionally for the next three or four days. Within a day or two the inner tube is made to slide out for a fraction of its length and by means of the simple positive-pressure apparatus employed at operation the lung is expanded as far as possible for a period of about five minutes. Gas may or may not be used during this procedure, depending on the sensibilities of the patient. The familiar active lung exercises (as blowing water from one siphon to another) are indulged in several times a day.

For the next few days the inner tube is gradually withdrawn, care being taken always to exhaust the bottle enough times to keep up a continual negative pressure here (probably once or twice a day); and the positive-pressure applications are religiously kept up. In the course of five or more days after the inner tube has been withdrawn a greater part of its length it is usually wise to remove the whole sliding drainage-tube with its outer tube and flange under positive pressure. The tubes are quickly cleaned, boiled and reinserted as at the operation. Some days later a similar cleaning may be necessary and after removal it is well to ascertain whether the sinus is still connected with an open pleural cavity. In the absence of suction on respiration it is to be surmised that this is not the case and the tubes and flange may then be supplanted by a simple single drainage-tube and the sinus treated as any sinus elsewhere in the body. This ends the attempts to return the pleural cavity to normal by expanding the lung by means of the negative pressure in the pleural cavity. Positive pressure by the positive-pressure apparatus and by the active "blowing" exercises are then depended on for the rest and not until the patient leaves the hospital should these methods be dispensed with; and after returning home the blowing exercises should be continued for six or eight weeks.

Tuberculous effusions, though associated with greater pathologic changes in the pleural cavity, yet from their very nature should without doubt be treated differently. A surgeon who has opened a tuberculous effusion will not hasten to repeat this performance. The sinuses act as tuberculous sinuses elsewhere in the body and are never too ready to heal. Added to this is the danger of secondary infection which may change the condition of the patient from a mild toxemia into one of much greater virulency and danger as far as the termination is concerned. Aspiration is better in this class of cases, thereby avoiding such complications and should the artificial pneumothorax be indicated as part treatment for the pulmonary condition this is readily accomplished at the same time. Injection of nitrogen may be employed if indicated with practically no added discomfort.

Practically the same treatment is used in the localized areas of pus seen occasionally in the pleural cavity as is employed in the freer empyemas. Localization by the *x*-ray and the use of the aspirating-needle offer the best solution of the difficulties in determining the exact position; it is, of course, unnecessary to warn against breaking through the limiting walls at operation. In cases which are "deep-set" and not adherent to the parietal pleura the operation is better performed in two stages, as in the opening of a subphrenic abscess through the pleural cavity route; opening the pleural cavity and placing drains to the end so that a well walled-off tract may be formed from the region of the abscess to the skin is the first step, and breaking gently into the confines of the abscess in twenty-four to forty-eight hours later is the second. The after-treatment is then similar to the after-treatment of the non-encapsulated form.

To one familiar with the complications and sequelæ of empyema, inflammations of the serous cavities, brain abscesses, general infection, distorted chests and twisted spines, discharging sinuses with their train of organic diseases, nephritis, hepatitis, amyloid degeneration of various organs, emaciation, anemia, and the ever-present discomfort to the individual of being the possessor of a continually discharging wound, the advocation of an earlier and more radical operation should appeal. When one realizes the absolute impossibility of foretelling the course any one such case may take it is not wise to consider the average case lightly with the idea that a majority of patients recover, but we should rather lay stress on the percentage of such cases which do not run a smooth course and are associated with complications and sequelæ frequently dangerous to life and usually detrimental to the individual's health for years after.

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THE RÔLE OF MILK IN THE CAUSATION OF THE CHICAGO EPIDEMIC OF SORE THROAT

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In a recent report on the origin of the epidemic of sore throat in Chicago, Heinemann[1] draws some conclusions in agreement with those reached by Miller and myself in a previous paper, but other conclusions he reaches are so conflicting with our own that a reply seems necessary. In this discussion we are considerably handicapped by the fact that the Dairy X Company has not been willing to furnish either the Health Department or ourselves with certain data that were requested.

I. PASTEURIZATION

Heinemann considers that "the milk of Dairy X has been apparently uniformly pasteurized," in spite of the numerous deviations below 160 F. recorded on the chart. These deficient temperatures are explained by the operator to be due to interruptions in the process, when the steam was shut off. At such times the operator states that no milk was allowed to leave the apparatus. It is evident that the written record is of no value to the inspector if every delinquent temperature can be so readily explained. A study of the daily charts in December shows that the average period required to pasteurize the milk was over three hours and fifty minutes, the minimum time being three hours and thirty minutes, with the temperature remaining near 160 F.

On December 17, 19 and 30, the process required three hours forty-five minutes, three hours forty minutes and four hours respectively. Now if we accept the operator's explanation that no milk was going through the apparatus while the temperature was below 160 F., we have remaining on these days only two hours fifteen minutes, two hours and twenty-five minutes, and two hours respectively of actual pasteurization. In other words, we find that the period of operation was not at

1. Heinemann, P. G.: The Epidemic of Sore Throat in Chicago, THE JOURNAL A. M. A., Aug. 31, 1912, p. 716. [Dr. Heinemann desires to state that his investigation was undertaken at the invitation of the Dairy X Company. A note to this effect was inadvertently omitted by the author from his report.—ED.]

all lengthened on account of the frequent and often long interruptions.

When the steam was turned on or shut off at the beginning or end of the day the rise and fall on the chart was always *abrupt*, whereas on the dates above mentioned, the rise in temperature from 130 to 160 F. was *gradual*, consuming from thirty to forty minutes.

Finally, we submit that frequent interruptions in the operation of a pasteurizing apparatus constitute *per se* a failure to pasteurize properly. Schorer and Rosenau[2] say:

> An automatically controlled pasteurizer does not heat the milk uniformly until it has been running at least seven minutes. In practice, pasteurization is frequently interrupted and in such cases there is multiplication of irregularities each time that the process is started anew. We therefore recommend that the milk which is pasteurized during the first ten minutes should again be run through the heater.

In view of all these circumstances we consider that the burden of proof that the milk was properly pasteurized on the above-mentioned days rests on the operator.

Heinemann argues that the bacterial counts of the Dairy X milk made by the Health Department and the company's own chemist were good. No deductions can be made from the Health Department's reports, as no counts were made from Aug. 29, 1911, to Jan. 25, 1912, and this was the period in which the great majority of sore throat cases occurred.

II. CONDITIONS PREVAILING AMONG NURSES IN HOSPITALS

Heinemann states that "of the six hospitals using milk from Dairy X, two had many cases of septic sore throat, the other four did not." Yet he estimates that in two of these exempt hospitals there were 26 and 29 per cent., respectively, of the nurses and employees who had sore throat! In our own statistics we have reported only the cases among the nurses, since a *written record* with the dates of illness is kept by the superintendent of nurses. The data concerning interns and employees are less accurate and reliable and are therefore excluded.

Official records of five hospitals cited by Heinemann, in which milk from Dairy X was consumed by the nurses are given in Table 1.

TABLE 1.—HOSPITALS WHERE MILK FROM DAIRY X WAS CONSUMED BY NURSES

Hospital	Nurses	Cases	Per cent.
Michael Reese	120	69	57.5
Henrotin	33	16	48
North Chicago	28	14	50
Washington Park	35	9	26
Columbia	7	0	0
Total	223	108	48.4

The sixth hospital noted by Heinemann, the Alexian Brothers', received its milk from two dairies. The nurses (who are Brothers) use almost entirely boiled milk and cream. We are informed by the Brother who was then head of the hospital, that the Brothers *never were served with milk from Dairy X*, which was reserved for patients and interns. None of the Brothers was affected.

The written records in twelve other hospitals in which the nurses were supplied by other dairies show that, of a total of 1,095 nurses, only sixty-one, or 5.6 per cent., were attacked. The morbidity among the nurses in the five hospitals supplied by Dairy X was, therefore, eight and one-half times as great as that in the twelve hospitals supplied by other dairies.

The comparative freedom from sore throat in four public institutions mentioned by Heinemann we cannot discuss, since the names of the institutions were not given and cannot be obtained.

2. Schorer and Rosenau: Jour. Med. Research, April, 1912, p. 156.

III. THE SITUATION IN ROGERS PARK

Heinemann obtained records of 105 cases of sore throat from physicians in Rogers Park and found that only 29 per cent. were users of milk from Dairy X, whereas this dairy is said to supply one-third of the total milk distributed in this community.

It seemed desirable to make a comparison of the number of cases occurring on a milk-route of Dairy X with that of another dairy, as was done in other parts of the city, but the lists of customers could not be secured. An extensive house-to-house canvas was therefore carried out in Rogers Park with the aid of the Health Department.

TABLE 2.—PREVALENCE OF SORE THROAT IN ROGERS PARK AMONG CUSTOMERS OF VARIOUS DAIRIES

	Dairy									
	A	B	X	C	D	E	F	G	H	Total
Number of households investigated	203	144	141	85	72	22	20	8	3	698
Number of households attacked	15.5	8	67	7	6.3	.3	4	0	0	108
Percentage of households attacked	7.6	5.5	47.5	8	8.8	1.4	20	0	0	...
Number of persons attacked	33	15	142	16	7	2	5	0	0	220
Percentage of total cases of sore throat	15	7	64	7.6	3.2	1	1.8	0	0	...
Percentage of total milk-supply	29	20.6	20.2	12.2	10	3.2	3	1	4	...

Table 2 sets forth the results of a canvas of 698 families. A comparison of the five large dairies shows that 47.5 per cent. of all households supplied by Dairy X were stricken with sore throat, while only 5.5 per cent. to 8.8 per cent. of the households supplied by the other dairies were affected. In the smaller dairies the percentages vary from 0 to 20 per cent., but are less significant.

In the 141 households using milk from Dairy X, there were 142 cases of sore throat; in 557 households using milk from other dairies, there were 78 cases of sore throat. Of a total of 220 cases of sore throat, 142, or 64 per cent., were users of milk from Dairy X, although this dairy supplied only 20 per cent. of the families investigated. In other words Dairy X, supplying one-fifth of the families with milk, furnished nearly twice the number of cases of sore throat found in all other dairies combined.

The percentage morbidity among customers of Dairy X in Rogers Park was 47.5 as compared with 50 per cent. in Hyde Park, 47 per cent. in the Twenty-Second Street District, 55 per cent. on the North Side and 66 per cent. in Batavia.

IV. THE SOURCES OF CONTAMINATION

Heinemann called attention to a case of severe sore throat at the bottling plant which may well have been an important source of contamination of the milk. This, however, does not solve the problem. In searching for pollution of a stream we must continue up its course until evidence of contamination ceases. Similarly, we must consider the twenty-nine cases of sore throat among the milkers as potential sources of milk contamination. These individuals handled and drank the milk *before* it reached the bottling-plant.

Any of these twenty-nine cases could have contaminated the milk and have been the cause of sore throat at the bottling-plant, whereas the employee at the plant could not reasonably be held responsible for sore throat among the milkers.

Whether the bovine mastitis was the primary focus of infection to which the milkers' sore throat was secondary, or the mastitis was secondary to the human infection, or the two types of bovine and human infection were entirely independent, I do not pretend to say. This question has not been determined in other milk-borne epidemics. The fact remains that mastitis due to streptococcus was prevalent in the cows, and sore throat due to streptococcus was prevalent among the milkers. I believe that on most days the streptococci were probably killed in the heating-apparatus, but that on the days above mentioned, large numbers passed unscathed through the apparatus and gave rise to successive outbreaks of sore throat among the consumers of the milk.

122 South Michigan Boulvard.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

PHENOCO.—Phenoco is said to be a mixture of coal-tar creosote and higher phenol-homologues, in soap solution. It is stated to contain coal-tar creosote, 8 per cent., phenol-homologues, 62 per cent., and soap 30 per cent.

In the above definition the term "coal-tar creosote" is stated to signify the product obtained by the destructive distillation of coal, containing 15 per cent. of cresols, but no phenol; while the term "higher phenol-homologues" is used to designate phenols containing two or more methyl groups.

It is said to be prepared by incorporating a nearly dry, vegetable oil soap with the coal tar creosote and phenol-homologues at a temperature of 100 C. (212 F.) under continuous agitation until complete solution has taken place.

Phenoco is a dark brown fluid of characteristic, coal tar-like odor. It is miscible with water in all proportions, forming a white emulsion; it is soluble in alcohol, ether, acetone and in fixed oils, forming clear solutions. It is compatible with physiological salt solution. It is incompatible with strong alkalis and acids.

When tested by the "phenol coefficient" method of the Hygienic Laboratory of the U. S. Public Health Service (Jour. of Infectious Diseases, Vol. 8, No. 1, January, 1911), it is said to be fifteen to sixteen times stronger, as a germicide, than pure phenol.

The chemical composition of phenoco is controlled according to the method published in Bulletin 107 Bureau of Animal Industry, "The Analysis of Coal-Tar Creosote and Cresylic Acid Sheep Dips."

Actions and Uses.—Phenoco is an antiseptic and germicide, being in the latter respect fifteen to sixteen times stronger than phenol. It is stated to be non-caustic, non-irritant and, for mammals, about one-half as toxic as phenol.

It is said to be useful in minor surgery, obstetrics, gynecology, ophthalmology, otology, diseases of the skin, etc.

Dosage.—It is used in dilutions of 1 per cent. to 5 per cent., or higher, according to the severity of the case.

Manufactured by the West Disinfecting Co., New York. Not patented. U. S. trademark No. 61,552.

TUBERCULIN PREPARATIONS (See N. N. R., 1912, p. 214). Cutter Laboratory, Berkeley, Cal.

Tuberculin Bacillen Emulsion.—Tuberculin B. E.—A suspension of ground tubercle bacilli containing 5 mg. of the solid tubercle substance to each Cc. Dose from 1/1000 mg. to 100 mg. or more of the fluid B. E. Tuberculin.

Tuberculin B. E. Bovine.—Made in the same manner as the foregoing, except that the tubercle bacillus used is of the bovine type.

Tuberculin Old (Tuberculin O. T.).—In 1 Cc. vials, preserved with trikresol; for use in solutions only. Also in serial dilutions; the latter packages containing 5 bottles each holding about 8 Cc., ranging from 0.01 to 100 mg. per Cc.

Tuberculin O. T. Bovine.—Made by the same process as the foregoing except that the organism used is of the bovine type.

Tuberculin Bouillon Filtrate.—In 1 Cc. vials; preserved with 4/10 per cent. trikresol. Dosage from 1/100 to 100 mg. or more of the fluid Tuberculin.

Tuberculin B. F. Bovine.—Made in the same manner except that the bovine type of tubercle bacillus is used.

Tuberculin T. R.—Tubercle Residue.—A suspension of 2 mg. of tubercle substance in each Cc. of the finished product. Dose, from 1/1000 mg. to 100 mg. or more of the fluid T. R.

Tuberculin Ointment (Moro Ointment).—A mixture of 50 per cent. each anhydrous wool fat and Tuberculin O. T., human strain. Dose, varying amounts, usually about 2/10 Gm.

Tuberculin for the Thermal Reaction.—Each Cc. contains 1 mg. Tuberculin, O. T.

Therapeutics

DISTURBANCES OF THE HEART

(Continued from page 1625)

MYOCARDIAL DISTURBANCES

While the myocardium is the most important muscle structure of the body, it has but recently been studied carefully or well understood clinically or pathologically. A heart was "hypertrophied" or "dilated" or perhaps "fatty." It suffered from "pain," "angina pectoris," from some "serious weakness" or from "coronary disease," and that ended the pathology and the clinical diagnosis. This is the age of heart defects; no one can understand a patient's condition now no matter what ails him, without studying his heart. No one can treat a patient properly now without considering the management of his circulation. No one should administer a drug now without considering what it will do to the patient's heart.

Although we are scientifically interested in the administration of specific treatments, antitoxins and vaccines; although we have a better understanding of food values, and order diets with more careful consideration of the exact needs of the individual, and although we are using various physical methods to promote elimination of toxins, poisons and products of metabolism, we have until lately forgotten the physical fact that one-thirteenth of the weight of a normal adult is blood. A man who weighs 170 pounds has 13 pounds of blood. The above proportion of course is not true in the obese, and is not true in children. Whether the individual is sick in bed, miserable though up and about, or beginning to feel the first sensations of slight incapacity for his life-work, his ability properly to circulate this one-thirteenth of his weight through the various arterial and venous channels and capillary tracts must now, with the increasing tension and speed of our lives, be taken into consideration.

The more and more frequently repeated statements that the operation was successfuly performed but that the patient died of shock, and that the typhoid fever and the pneumonia were being successfully combated, but that the patient died of heart failure, and together with the increase in arteriosclerosis, cardiac disturbances and renal disease, emphatically present the necessity of more carefully studying the circulation. A better understanding and the constant study of the blood-pressure shows nothing but the necessity of the age. The unwillingness of the patient to suffer pain, even for a few minutes, without some narcotic, generally a cardiac debilitating drug, means that, if he is a sufferer from chronic or recurrent pain, he has taken a great deal of medicine that has done his heart no good. Repeated high tension of life raises the blood-pressure and puts

more work on the heart. Therefore the heart is found weary, if not actually degenerated when any serious accident, medical or surgical, happens to the patient.

The requirements of the age have, then, necessitated that the heart be more carefully studied, and therefore the heart strength and its disturbances are better understood. The mere determination as to where the apex-beat is located, as to what murmurs may be present is not sufficient; we must attempt to determine the probable condition of the myocardium. The following conditions are recognized: (1) acute myocarditis, (2) chronic myocarditis (fibrosis, cardiosclerosis), (3) fatty degeneration, and (4) fatty heart.

I. ACUTE MYOCARDITIS

Probably most acute infections cause more or less myocarditis, depending on their intensity and their prolongation. This disturbance of the heart is often unrecognized, and has been simply referred to as "the heart growing weaker from the fever process." The acute infections most likely to cause a myocarditis are rheumatism, influenza, sepsis, cerebrospinal meningitis, diphtheria, typhoid fever and scarlet fever. It is probably rare when acute endocarditis occurs that more or less myocarditis is not present. The acute myocarditis may develop some fatty degeneration, and with this softening and weakening of the heart muscle acute dilatation readily occurs, which may be a cause of sudden death, or if less serious, may be the cause of prolonged disability, if the heart ever recovers its original size and strength.

The symptoms are often indefinite and the diagnosis of the condition hardly possible. It may be taken for granted, however, that hardly any serious illness can long continue without cardiac muscle disturbance. If endocarditis is present, soft systolic murmurs soon appear. With the acute myocarditis developing the apex-beat is less positive, less accentuated, and later it becomes diffuse and even feeble. The closure of the aortic valve is less typically sharp, showing that the blood-vessels are not so thoroughly filled. The peripheral circulation is not so active, the blood-pressure falls and the heart becomes more rapid, especially on the least exertion. All of these signs indicate myocardial weakness.

The treatment of this condition is largely preventive. It should be well recognized that prolonged high fever, prolonged insufficient or improper nutrition, prolonged acute pain and especially prolonged septic processes will always cause myocardial degeneration. It should be recognized that after ether and chloroform anesthesia, especially after chloroform, the heart muscle may be disturbed and the tonicity be lost. Therefore after anesthesias, after operations, after all illnesses that have lasted more than a few days the convalescence of the patient must be more or less deliberate. Sudden rising, sudden erect posture, the exertion of walking too early, going up stairs too early or taking moderate, and later severe exercise too early, may cause dilatation of the heart muscle that has become weakened by acute myocarditis. If myocarditis is believed or known to be present, cardiac tonics such as digitalis should not be given; large doses of strychnin should not be given; vasocontractors such as ergot should not be given; large amounts of food or large bulks of liquid should not be taken into the stomach at one time; in fact, unless there is some special indication, the twenty-four-hour amount of fluid should be diminished. The surface circulation and the muscle circulation should be improved by such cold or warm water applications as the disease or condition call for. Massage should be early inaugurated to promote the return circulation. The heart should be treated as though it were the frailest of Venetian glass and would crack with the least rough handling, or even with a rapid change of temperature, great cold or too much heat. A prolonged, tedious convalescence, with the return to activity so graded as to give the heart no strain and to keep its work always just below what it is able to do will often mean return to perfect strength and health.

No cardiac debilitating drug should be administered when myocarditis has been surmised or diagnosed. The safest hypnotic, if one is needed, is morphin in small doses. If there are weakening perspirations, atropin should be given, especially as it is also a circulatory stimulant. Calcium in almost any form seems to be of value in the majority of heart conditions. It is a sedative to the nervous system, and is certainly indicated in acute myocarditis. Calcium lactate is perhaps the best salt to administer, in doses of 0.25 gm. (4 grains), three or four times in twenty-four hours. Calcium glycerophosphate may be used, in powder form or in capsule, in doses of 0.30 gm. (5 grains) three or four times in twenty-four hours; or lime-water may be given.

An exact prognosis of this inflammation is impossible. We do not know how far an acute myocarditis may progress and entire recovery take place; we do not know how slight a myocarditis may cause serious symptoms. Clinically we know that many patients after serious illness never again have perfect circulatory strength. Other patients almost die of heart failure, and yet apparently absolutely recover their ability to do hard physical work.

II. CHRONIC MYOCARDITIS: FIBROSIS

Chronic myocarditis may develop on an acute myocarditis, but is generally a slowly progressive chronic process from the beginning; it occurs mostly in persons past middle life, and as a rule is not primarily associated with rheumatism or valvular disease of the heart. Perhaps generally the term "chronic myocarditis" is incorrect, as a real inflammatory condition is not present and has not been present; it is really a degenerative process with the development of connective tissue, a fibrosis and more or less hardening of the arterioles, a cardiosclerosis. In many instances this fibrosis is associated with fat deposits or fatty degeneration. The disease is often caused by a narrowing or obstruction or calcareous degeneration of the coronary arteries, thus diminishing the blood-supply to the heart muscle. This chronic myocardial degeneration is often a part of the general arteriosclerosis, and is an important factor in what is termed cardiovascular-renal disease. In simple chronic renal diseases the heart first normally hypertrophies to overcome the increased blood tension and increased resistance.

The principal causes of this degeneration are normal old age, or premature age caused by various conditions. In other words, anything that hastens arteriosclerosis will cause myocardial degeneration. The causes recognized as most frequently producing this condition are syphilis; gout; repeated attacks of rheumatism; excess in the use of alcohol (meaning repeated daily too large amounts, as well as actual dipsomania); the overuse of tobacco; excess in drinking tea or coffee; general overeating, and excessive eating of meat in particular, if the organs of elimination do not work perfectly and if such eating causes or allows putrefactive changes in the intestines; and progressive, prolonged wasting diseases such as tuberculosis and cancer. It has also seemed in

some cases that the only cause was excessive, hard physical labor, including excessive athletic work, and in other cases that prolonged anxiety and worry has been a cause of cardiac degeneration and actual cardiac failure.

These myocardial changes are sometimes associated with chronic pericarditis and chronic endocarditis, and may accompany or follow valvular disease of the heart. Failure of compensation in valvular disease and dilatation of the heart are sequences that sooner or later follow.

The symptoms of chronic myocardial degeneration are progressive weakness, slight at first, noticeable on exertion (and what was not considered exertion becomes such), as evidenced by slight palpitation, slight shortness of breath, leg weariness and mental tire. The heart frequently becomes more rapid, not only with exertion and change of position to the erect, but even after eating. Slight cardiac stimulants, as coffee, affect the heart more than previously; there is some sleeplessness, more or less troublesome; and more or less indigestion. There may be mental irritability and some mental deterioration, as shown in various ways. There is likely to be slight edemas of the lower extremities toward night. The amount of urine may diminish. A previously high blood-pressure becomes lower. The pulse may be occasionally intermittent, and later actually irregular.

The physical signs often show an enlargement of the heart, with increased activity at first, from irritability of the heart and a lack of perfect coordination; later the heart may show typical signs of weakness. Not infrequently a heart suffering from fibrosis acts perfectly until some sudden exertion, as lifting, running or serious illness, causes it suddenly to become weak. Such a heart rarely regains its former strength. This occurs frequently to those who have supposed themselves to be in perfect physical health. Some sudden strain which they have previously been able to endure without injury, such as carrying a weight upstairs, cranking a refractory engine, pumping up a series of tires or walking rapidly with a younger or more active companion, will suddenly give cardiac distress signals, serious exhaustion and more or less lengthy prostration, perhaps for an hour or so, or perhaps for several days. Permanent cardiac weakness may follow, or compensation may again occur, to be more easily broken later. Slight cardiac pains and sensations referred to the cardiac region become frequent. Disliking to lie on the left side, when previously the patient has been able to sleep on this side without discomfort, is an evidence of cardiac disturbance. There may be no real pains, but the patient becomes conscious of his heart, perhaps for the first time in his life. This alone is an indication of coming trouble.

If these signs and symptoms develop late in life, or at any age with other symptoms of sclerosis or senility, little can be done therapeutically except to afford temporary relief and to prevent the occurrence of acute attacks of cardiac distress or dyspnea. If the disturbance is really due to chronic cardiac degeneration, the sooner the patient learns that his ability is restricted, that his life is narrowed, the better for his future.

The advice he should receive is well understood: to avoid physical efforts; to avoid mental tire; to avoid overeating or overdrinking of any foods or liquids; to reduce or abstain from alcohol, coffee, tea and tobacco, depending on what seems advisable in the individual case; to reduce the amount of meat eaten, especially if there is intestinal indigestion; to relieve intestinal indigestion; to cause free daily movements of the bowels; to abstain from any food that tends to cause gastric or intestinal flatulence; to abstain from such foods as contain nucleins, if the patient is gouty; to take frequent warm baths (not too hot) to promote the secretions and the circulation in the skin; and to take such daily exercise as seems advisable. If the patient cannot take exercise, simple calisthenics or massage should be instituted.

Whether nitroglycerin or other nitrite is advisable depends on the peripheral blood-pressure. If the blood-pressure is low, or not higher than is best for the patient, such treatment would be inadvisable. If, from the supposed cause, iodid seems to be indicated, it should be given in small doses and continued for some time. It is often wise, however, to give small doses, as 0.10 or 0.20 gm. (2 or 3 grains) once or twice in twenty-four hours, for a long period, to any patient who has fibrosis or sclerosis in any form. Iodid tends to prevent the progress of connective tissue formation. It is quite possible that some of its value is in activating a sluggish or imperfectly acting thyroid gland. If the patient is old, his thyroid is subinvoluting, and a little more of its activity will be of advantage. Many diseases that cause chronic myocarditis also cause, later, subactivity of the thyroid. Thyroid extract may be indicated if the patient is obese.

If, in spite of this management and treatment, the patient has cardiac asthma attacks, with or without pain, especially if there are pendent edemas, the question arises as to whether or not digitalis should be given. In such cases one cannot tell without trying whether digitalis will be of benefit or will cause more discomfort. A small dose of an active preparation should be given at first twice in twenty-four hours, and after a week once in twenty-four hours, its action being carefully watched and the decision as to whether the dose is too large or too small arrived at. It may do a great amount of good; it can cause increased cardiac pains. If used carefully and stopped when it appears not to be acting well, it will do no harm.

Chilling of the surface of the body should be avoided; in other words, sudden cold or sustained severe cold, by increasing the contraction of the peripheral blood-vessels and putting more strain on the heart muscle, is to be avoided if possible. More hours in bed at night and lying down after the heavier meals of the day will tend to give the heart the kind of rest it needs. Also complete rest for one day a week, or a rest of several days at a time, and a rest, both mental and physical, with such walking, golfing or riding as seems advisable, for at least one month every year, will prolong the lives of these patients, and may make an imperfect heart act well for months and years. If the patient is anemic he should, of course, receive some non-astringent iron, and an *Eisenzucker* tablet (saccharated oxid of iron), in small doses, 0.20 gm. (3 grains), once or twice in twenty-four hours, is sufficient.

The prognosis of a case diagnosed as chronic myocarditis or chronic degeneration of the heart is doubtful, as one cannot tell until several weeks or months of observation whether this particular heart also has fatty degeneration or not. If there is fatty degeneration, the prognosis is bad. If there is no serious fatty degeneration, the patient, with the modified life outlined, may live for a long time. Acute dilatation from any serious strain on the heart may occur, and if there is fatty degeneration it is likely to occur at any time. Attacks of cardiac asthma are always serious and always damage the heart a little more.

(To be continued)

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[*For other information see second page following reading matter*]

SATURDAY, NOVEMBER 9, 1912

THE ADRENALS AND THE SYMPATHETIC NERVOUS SYSTEM

There has arisen, of late, a growing appreciation of the fact that a considerable number of the physiologic responses of the organism may be under a sort of double control. On the one hand, impulses are brought to secretory cells or muscular structures along nervous paths; on the other, the humoral channels carry chemical compounds which may act directly on glandular or contractile mechanisms without any immediate intervention of the nervous system. In the case of respiration, for example, the carbon dioxid content of the circulating blood normally tends to regulate the character of the breathing movements. This is distinctly a type of chemical control in which the gaseous product of tissue waste acts as a so-called hormone or chemical regulator. But when an unexpected stimulus from outside rapidly alters the rate or depth of breathing, the modifying impulse is usually transmitted to the respiratory muscles more directly through some nervous path. Both modes of excitation, the chemical and the nervous, find application in the respiratory functions. Other comparable illustrations might be cited in two-fold regulations of secretion and of the movements of the alimentary canal. As Elliott remarks, the nature of the double action above referred to has never yet been analyzed, though it may contain the essential secret of nervous activity.

The epinephrin produced by the suprarenal glands is now commonly looked on as a typical hormone — a product of specialized cellular manufacture which is discharged into the circulation as an internal secretion. Numerous investigations, in particular those of the English school, have taught that epinephrin acts on various organs in precisely the same way as does the stimulation of the sympathetic nerve-supply of these organs. Contrary to the opinion still popularly held, it seems quite unlikely that the effect of the suprarenal product is exerted directly on the smooth muscle widely distributed in different parts of the body; for it is a fact that the musculature of some organs is "toned up" by epinephrin, whereas in other cases there may be an inhibition of tonus. Such unlike effects must have a local explanation, and the evidence points to the endings of the sympathetic nervous system as the seat of attack for this potent substance.

Granting, then, that epinephrin is liberated into the circulation in variable amounts from time to time through the agency of the glands in which it is produced, and assuming as we must that this chemical product vigorously influences numerous physiologic functions, how are its manufacture and secretion regulated? How is the suprarenal itself controlled in respect to so important a response as the liberation of a secretion which may almost instantly convert collapse into excellent vascular tone? That the ductless glands, and in particular the suprarenals, are under the dominance of the nervous system has long been maintained.[1] If this contention shall prove to be correct, it will be noted that the organism can control a widely distributed field of plain muscle directly through the sympathetic nerves, or indirectly by nervous impulses to the suprarenals, whence a chemical messenger, epinephrin, is dispatched to the same muscles almost simultaneously with the nervous impulses. The mere suggestion of some of the manifold known effects of epinephrin suffices to indicate how much is involved in this assumption. Aside from the blood-vessels, the musculature of the alimentary canal, the bladder, the uterus, the skin, the bronchial tubes, the iris, not to mention incidental metabolic functions, are influenced by this compound.

Quite recently American investigators[2] have reported facts which associate certain psychic states with stimulation of the sympathetic system and raise the question as to the resultant effect on the secretory activity of the suprarenals. It is known, for example, that fright, in appropriate subjects, will induce phenomena directly attributable to sympathetic stimulation, manifested in changes in the pupils, inhibition of peristaltic movements of the gastro-intestinal tract, accelerated pulse, and other ways. Cannon and de la Paz believe that they have demonstrated a coincident increase in the epinephrin content of the blood, leading one to conjecture that the suprarenals too have been drawn into participation in the response to the psychic manifestations. The discrimination between primary cause and effect is not easy here; yet the interrelation between the nervous and glandular systems deserves attention.

Related to such questions is that of the share taken by the suprarenal glands in resisting processes harmful to the body. If these secretory organs are called on to provide a product under all sorts of provocation, do they not experience exhaustion at times? Dr. T. R. Elliott[3] of the University College Hospital Medical School in London has broadly summarized his experience with human glands in the general statement that they suffer rapid exhaustion in cases of any microbic

1. Compare The Internal Secretion of the Adrenals, editorial, THE JOURNAL A. M. A., Aug. 31, 1912, p. 723.

2. Cannon, W. B., and de la Paz, D.: The Stimulation of Adrenal Secretion by Emotional Excitement, THE JOURNAL A. M. A., March 11, 1911, p. 742.

3. Elliott, T. R.: The Control of the Suprarenal Glands by the Splanchnic Nerves, Jour. Physiol., 1912, xliv, 374.

fever, of repeated simple hemorrhage, and of surgical shock. The conditions of fatal disease in man, however, are usually too complex to permit of simple analysis; hence Elliott had recourse to animal experimentation in which the individual factors of disease could be reproduced or controlled. The method consisted in measuring the residual epinephrin in the glands of individuals subjected to specific influences. An exhaustion of residual epinephrin is provoked by manifold causes, such as fright, anesthesia (with ether, chloroform or urethane [ethyl carbamate]), stimulation of afferent nerves or direct injury to the brain. In many cases this "emptying" of the glands is probably an expression of the efforts made to combat the fall of blood-pressure and other detrimental factors. The epinephrin exhaustion, in fatal cases, is not a primary factor leading to death, but is secondary — an expression of the struggle for life.

The way in which the entire machinery of the sympathetic musculature and the suprarenal glands may be thrown into activity by an emotional alarm like anger or fright reveals the wonderful character of the responses of the organism to psycnic as well as physical influences. Elliott aptly remarks that from the variety of methods and the rapidity with which epinephrin loss can be induced through the splanchnic nerves, it appears probable that the suprarenal glands are played on by the splanchnic nerves in the emotional and vasomotor reflexes with almost as delicate and ever-changing an adjustment as are the muscles of the peripheral tissues connected with the sympathetic nerves.

THE EARLIEST KNOWN PAIR OF SPECTACLES

The facts that the Chinese have long known of spectacles and that snow spectacles have been employed by the Samoyed tribes near the arctic circle have been frequently remarked on in books of travel, and Layard found a plano-convex lens of rock-crystal in the ruins of Nineveh; but that these oriental races knew of the use of eye-glasses before the fifteenth century is a matter of grave doubt, according to the best modern authorities — Hirschberg, Pansier, Fuchs. All European references to the use of spectacles before the year 1270 are dubious. Pliny's description of Nero looking at the gladiatorial combats in an emerald (*Nero princeps gladiatorum pugnas spectabat in smaragdo*) means at best only a lorgnette, or most probably a reflecting mirror. Roger Bacon seems to have known of magnifying lenses (1276), which soon became common enough, but the probable inventor of spectacles as such was a Florentine worthy on whose tombstone in the church of Santa Croce is the inscription: "Here lies Salvino d'Armato degli Armati of Florence, the inventor of spectacles. May God forgive his sins. [He died] Anno Domini 1317."[1] An old chronicle of the Dominican cloister of St. Catherine at Pisa states that Brother Alessandro de Spina, who died in 1313, taught himself and others how to make spectacles after seeing those of an earlier inventor, who was, in all likelihood, d'Armato. The dictionary of the Florentine Academy (1729) states under the heading "spectacles" (*occhiali*) that Rivalto, a monk of Pisa, in a sermon delivered Feb. 23, 1305, said that spectacles had been invented less than twenty years before that date; and an Italian manuscript of 1289, published by the biologist-physician, Francesco Redi, states that spectacles were of recent invention. This would fix the date of d'Armato's invention at not later than 1285.

Early in the fourteenth century, spectacles were mentioned in the writings of Bernard de Gordon, Arnold of Villanova and Guy de Chauliac, and they were afterward figured in the pictures and public documents of the period, such as Jan van Eyck's Madonna at Bruges, Martin Schöngauer's engraving of the Death of Mary, the decorations of the altar of St. Jacob's Church at Rothenburg an der Tauber or the drawings in a Ratisbon manuscript of 1600, now in the Germanic Museum at Nuremberg. All these indicate huge circular lenses mounted in rings of black horn or leather, united by a short leather band and fastened by another band passing around the head, the lorgnette and pince-nez patterns with metal mounts appearing later.

Prof. R. Greeff[2] of Berlin, in a recent interesting article, says that after long search in different museums and collections he has at length found the earliest known specimens of the old leather-mounted type of the sixteenth century. These are now to be seen in the Pirkheimer room in the Wartburg (near Eisenach, Thuringia), and were discovered behind the wooden wainscoting of Willibald Pirkheimer's chamber at Nuremberg in 1867, when the latter apartment was removed in its entirety to Luther's famous retreat. Greeff thinks that they undoubtedly belonged to the doughty old humanist who was councilor to Maximilian I and Luther's friend and whose portrait was etched by Albrecht Dürer in 1524. Pirkheimer's spectacles consist of eight pairs of the above type, the lenses mostly sprung or broken, and clouded through some physicochemical changes in the interior of the glass. Their convexity shows them to belong to an early period, which Greeff fixes at between 1520 and 1530, the date of Pirkheimer's death (at the age of 60). The mounts are of the earlier type in tanned leather colored black, and the eye-glasses of this period were called "nose-riders" (*Nasenreiter*) because they straddled the nose like a modern pince-nez and had to be supported by the hand from the side or above when used for reading. They were very expensive, costing, it is said, from $45 to $75 a pair, and as all eight pairs have the same radius of curvature, the set was probably little adapted to changes in accommodation and refraction, and must have been a costly layout for even a wealthy

1. "† QVI DIACE SALVINO D ARMATO DEGL ARMATI DI FIR. INVENTOR DEGL OCHIALI. DIO PERDONI LA PECCATA. ANNO. D. MCCCXVII." Cited by Hirschberg in his Geschichte der Augenheilkunde, Leipsic, 1906 (Graefe-Saemisch Handbuch, Nos. 109-110, p. 273, Footnote 3).

2. Greeff, R.: Die ältesten uns erhaltenen Brillen, Arch. f. Augenh., 1912, lxxii, 44.

Nuremberg patrician of the sixteenth century. Professor Greeff closes his interesting paper with a humorous imaginative picture of the old scholar, holding two or even three pairs of his glasses before his eyes to get a better view of the printed page, resting now and then from sheer fatigue, and finally cursing and scolding his servants for losing the glasses or sweeping them out of the room, in ignorance of the fact that the whole outfit had slipped behind the wainscoting in his little chamber.

COFFEE SUBSTITUTES: CHICORY

At present there is a wide-spread agitation in favor of the use of substitutes for tea and coffee, the beverages which have won so prominent a place as food accessories in the dietary of man. The current talk about coffee substitutes emanates from a variety of sources and is encouraged by a variety of interests. In part it is a reaction against alleged objectionable or actually detrimental effects of coffee on the individual; in part the outcry is a feature of the temperance wave which is directed against stimulants in general; in small degree attention has been directed to the substitutes for coffee because they happen to crop out in the guise of adulterants for the genuine product; but above all else the question of the advisability of replacing coffee has been raised by the potent force of almost unlimited advertising. This commercial propaganda has incorporated into itself the commendation of a sort of pseudoscience; and any one who follows the present purchasing habits of the American public can scarcely deny that some one is reaping a financial harvest from the seeds sown in the columns of our newspapers and magazines. The story of the substitutes for coffee has been typical of American public procedure. Expert opinion respecting the so-called coffee substitutes has never been solicited and there is no indication that the lack of dependable information is missed. Advertising talent has become an accepted substitute for scientific evidence in many quarters, even among intelligent laymen.

Chicory is widely used as an admixture with coffee or as a substitute for it, although it is by no means so well known in this country as in Europe. Professor Oswald Schmiedeberg, the Nestor of German pharmacologists, has lately collected numerous facts of historic and hygienic interest in relation to the significance of chicory in the diet.[1] One species of chicory commonly known as endive is familiar through its use as a vegetable in the same manner as lettuce. The product of immediate interest as a coffee surrogate is the roasted root of *Cichorium intybus*, one of the *Compositae*.

The history of the use of chicory is full of those amusing contradictions that have characterized the dietetic theory and practice of the past. Although the plant was originally applied to human use solely for curative purposes, its employment in the dietary has been sanctioned by generations. It is reported that the custom of roasting and pulverizing the root prior to its employment was the outcome of a chance suggestion. The decoctions of the dry chicory root became unpalatable to an august patient, whereupon the physician who ordered it as a remedy concluded to roast the plant material in the same way that coffee is prepared for extraction. When chicory began to be introduced more extensively as a coffee surrogate in the latter part of the eighteenth century, it was pronounced by expert testimony of that period to be less objectionable than coffee from the point of view of health. Its harmlessness in the form of a beverage was almost universally admitted, although many were unwilling to grant that it could replace the stimulating features of real coffee. In the middle of the nineteenth century a sudden change of sentiment became apparent. Manifold minor ailments or untoward symptoms, most of them familiar to the physician as types of daily complaints, were charged to the use of chicory coffee.

The fact that chicory does not contain caffein has long been known. This places it at once in contrast with the rival coffee-bean and has been one of the reasons advanced for the alleged dietetic inferiority of the substitute. Other purin derivatives, such as theobromin, theophyllin or their allies, are likewise absent. According to Schmiedeberg's investigation the chicory is, further, devoid of alkaloids. A substance imparting a bitter taste to the extracts has received the name "intybin." In addition, there is a considerable content of the carbohydrate inulin in the root. By roasting, this is converted into levulose, dextrin-like compounds and aromatic oxidation products, all of which, along with the intybin, impart a characteristic flavor and aroma to the decoction of the root. According to Schmiedeberg's investigations the bitter intybin is physiologically harmless, as are the other substances extracted with it. Chicory, then, deserves a reputation for freedom from noxious properties, along with the roasted cereals and other coffee substitutes.

It should be pointed out that chicory has won a conspicuous place for itself among the diet accessories of great groups of people independently of any advertisement which it has received in commercial ways. To attribute this unique popularity to mere chance is scarcely an adequate explanation. It is far more likely that chicory furnishes a decoction with certain properties that appeal to the palate of the masses. The carbohydrates which the root contains afford, as a result of the roasting process, products which are comparable with those of the roasted cereals now so widely introduced. We need not admit that the flavor of the chicory beverage can compete with that of good coffee in the estimation of a discriminating palate. Nevertheless the combination of bitter, sweet and aromatic features makes it appeal to many, while the color serves to supplement the weakness of the poorer brands of coffee or to imitate them with psychologic success. Schmiedeberg believes

1. Schmiedeberg, O.: Historische und experimentelle Untersuchungen über die Zichorie und den Zichorienkaffee in diätetischer und gesundheitlicher Beziehung, Arch. f. Hyg., 1912, lxxvi, 210.

that the bitter or astringent feature plays a physiologic rôle. It is well known that bitter taste lends an efficiency to various valued stomachics. A well-known writer[2] has frankly stated in regard to coffee surrogates that they are for the most part worthless, and serve merely to produce dark-colored concoctions. He adds that the public ought to be apprised of the fact and directed away from the purchase of such useless products. In the case of chicory, however, there may be a helpful hint in the almost instinctive use of the preparation in many quarters. If it awakens a keener appetite and thereby facilitates the secretion of the digestive juices, even in psychic or indirect ways (aside from a further mild antiputrefactive property which has been ascribed to chicory decoctions by Schmiedeberg), this surrogate will deserve the same sort of dietetic recognition that is accorded to many spices which act similarly. A harmless beverage which may stimulate the appetite and promote digestion apart from any content of recognized drugs like caffein deserves to have its properties fully disclosed. The knowledge thus gained does not, however, solve the much-debated question of the place of real coffee in the dietary.

TELEPATHIC DIAGNOSIS!

Dr. J. A. Quackenbos of New York, who has from time to time enriched the field of psychiatrics by amazing if undemonstrable statements, has had the good fortune to find a Belgian woman having the power to diagnose disease at a distance; when entranced and commanded to go (in psychism) to a designated patient she can describe the latter's bodily conditions. On several occasions, being several miles away, the Belgian seeress has defined, with startling exactness, lesions of which she could know nothing. The procedure is as follows:

Let the physician be designated as Dr. A; the Belgian mystic Mme. B and a woman (the sister of a New York physician) as Miss C, whose business it is to hypnotize or put into a quasicataleptic state Mme. B, and then to direct the latter to go (psychically) to the patient, look into his body and describe the nature of his trouble. This is done in detail by Mme. B, who points out conditions of which Dr. A, Miss C and her own (Mme. B's) objective self could not have had the slightest knowledge. In one instance, in which Dr. Quackenbos followed her statements through the telephone, Mme. B "diagnosed, while five miles away, an obscure case in my office and told correctly the cause of the lesion." She not only feels and acts the part of the person *en rapport*, "but she is that person unmistakably, possessed of his knowledge, character traits, feelings and mental attitudes; he talks through her lips, suffers through her bodily organs and energizes through her brain. A remote subject is thus brought face to face with me, and I am enabled to effect salutary changes against his objective will and consent by appeal to the commingled subliminal selves. If this unparagoned means of enforced attention results from a spiritual facility that is lasting, then every man and woman in the world is accessible through this channel; susceptible to corralling by this subliminal method of approach; coercible to apprehension of the wrongness of positions, incentives and motives for action when they are wrong, and changeable to right view and moral action."

Every one will at once see the possibilities and advantages of this method of diagnosis: Should a physician be sent for on an inclement night, or summoned to a case of virulent and dangerous infection, he need not leave his comfortable bed, but may instead simply reach over for the receiver, and telephone the hypnotist, who will in turn call up the medium-diagnostician, who will then throw herself into the requisite psychic state, pay the patient a hypnotic visit and find out what the trouble is. It is but fair, however, to note the objection that the medium-diagnostician is apt to suffer in her trance, because she then "assumes the symptoms and sensations she discovers, and on several occasions she has suffered acutely for hours from pains and perceptions similar to those of the patient."

How these results are achieved Quackenbos is not sure, though he writes of a "series of 10,000 experiences with hypnotized patients." He knows that "telepathy works through the subconscious"; that "time and space offer no obstructions"; that "matter is penetrable and perceptive and becomes infinitely sublimated"; yet he "must admit that the laws of telepathic transmission are unknown." He gives Bozzano's explanation of telepathy as being "due to an initial physiopsychic vibration which, expanding concentrically in all directions, reaches the brain of the percipient, bringing with it the agent's thought," and he believes that Mme. B's power lies in intercepting the vibrations that link her to the person she is in search of. Mme. B, for her part, describes "spirally undulating physiopsychic vibrations which, she thinks, may have curative powers."

As usual in such writings as this, we are assured that the race is on the threshold of a discovery, of wonders far beyond any yet disclosed; that man is going to be "superior to all science as at present interpreted"—poor, much-objurgated science, which is after all nothing else than systematized common sense — nothing else than the crystallized, reasoned wisdom of the ages! And a lot of weird statements are breezily set forth which are "commonly admitted" by "advanced thinkers"—"leaders of science," among whom Quackenbos cites only the name of the sensational Flammarion! On the other hand, we do know that such phenomena as spiritualism, clairvoyance, prescience and the like have been patiently investigated by such men as Huxley, Faraday, Newcomb, Spencer and Darwin, their conclusions having been pretty well summed up in the latter's observation, "the Lord have mercy on us all if we have to believe in such rubbish." For further details we must refer the impa-

2. Rubner, M.: Lehrbuch der Hygiene, 1903, p. 595.

tient reader to Quackenbos' article,[1] among the many astonishing features of which the most astonishing is that it appears, not in a theosophic journal, but in the *North American Review*.

REPRODUCTION WITHOUT FERTILIZATION

To those who are interested in the broader significance and underlying import of biologic processes the real purpose of the process of fertilization has furnished a theme for speculative discussion. The spontaneous growth which is now and then exhibited in parthenogenetic development makes one hesitate to ascribe to the mechanism of normal fertilization any specific indispensable function; and it raises the question whether typical fertilization does not, after all, serve some more indirect use than the mere initiation of the growth impulse. There is a widely promulgated view that protoplasm manifests an inherent tendency toward senescence, so that there is a natural periodic physiologic need of rejuvenation by which the vigor of cells may be renewed. This forms the basis for the "dynamic" view of fertilization whereby animals are supposed to be endowed with the potential for a new period of reproductive activity. The general vitality of protoplasm is thereby restored or maintained.

It is quite possible, however, as Woodruff has remarked, that fertilization is connected in some way with the phenomenon of variation, or may be a process which enables certain forms to withstand changed environmental conditions. In the higher forms the agency of the male element as a bearer of hereditary qualities is well appreciated. The conjugation of the unicellular organisms has often been described as analogous to fertilization in the more complex types of living beings and has been regarded as offering a natural means of approach to the problems of fertilization. What then, is the relation of conjugation in the protozoa to protoplasmic old age and protoplasmic rejuvenation? Hitherto the conclusion has been reached that the infusoria cannot reproduce indefinitely without conjugation. In a most laborious and painstaking study of the reproduction of a familiar and widely distributed form known as *Paramecium*, Professor Woodruff of Yale University has succeeded in continuing a culture from a single, isolated specimen for more than five years, during which time it passed through more than three thousand generations without signs of degeneration and with full maintenance of morphologic characteristics and physiologic vigor.[2] This remarkable result seems to establish the fundamental biologic fact that the protoplasm of a single animal cell may be self-sufficient to perpetuate itself indefinitely. Woodruff concludes that his experiment eliminates the phenomenon of conjugation or fertilization as a fundamental inherent necessity of protoplasm for its continued existence.

Figures are sometimes fascinating. If it is borne in mind that the organism described above has reproduced itself entirely by a fission process the statistics of the experiment permit some startling speculations. The protoplasm of the cell originally isolated possessed at least the potentiality to reproduce cells to a number represented by 2 raised to more than the 3,000th power, or (according to Woodruff's calculation) a volume of protoplasm "approximately equal to $10^{1,000}$ times the volume of the earth." Surely there is in this no suggestion of senescence or of the need of fertilization as a primary attribute of living matter.

1. Quackenbos, J. A.: Is Telepathy a Fact or a Delusion? North Am. Rev., September, 1912.

2. Woodruff, L. L.: A Summary of the Results of Certain Physiologic Studies on a Pedigreed Race of Paramecium, Biochem. Bull., 1912, i, 396; A Five-Year Pedigreed Race of Paramecium Without Conjugation, Proc. Soc. Exper. Biol. and Med., 1912, ix, 121

COUNTY HOSPITALS FOR THE TUBERCULOUS

In 1909 a law was passed in New York state authorizing the establishment and maintenance in each county, by its board of supervisors, of its own hospital for the tuberculous.[1] The New York State Department of Health, in conjunction with the State Charities Association of that commonwealth, has since been striving to make this law effective, with gratifying results. Twenty-one counties have decided to build such institutions, some of which, indeed, are in operation; and it is hoped that by the end of the present year thirty will be projected, representing action by more than half of the counties in the state.

The representatives of the department of health and of the association cooperating so ably with it, in addressing the laity in mass-meetings and otherwise, have had to dispel some erroneous ideas and to do considerable educating; especially has this been so in the rural districts, where there seems to be a false sense of security regarding tuberculosis. The State Department of Health, by reason of its governmental character, is peculiarly anxious for the establishment of these institutions, because it recognizes its responsibility to protect the people it serves from tuberculosis precisely as from small-pox or typhoid or any other infection. By the provisions of the law cited any sufferer who is a citizen of his county is eligible in the order of application; after admission his finances are ascertained and if he can pay, wholly or in part, he is expected to do so. But well-to-do and poor alike must be received without discrimination. The tuberculous in all stages may apply, wherefore the name "sanatorium-hospital" has been suggested for these institutions. As the patient's home is within the county, his relatives may at little trouble and expense visit him from time to time, so that those devitalizing factors, nostalgia and family worries, are largely obviated. Those working for the establishment

1. A copy of this law (Chapter 341 of the Laws of 1909) may be obtained from the New York State Department of Health, Albany, N. Y.

of these institutions have ever to meet the objection, demonstrated over and over again to be without foundation, that the sanatoriums would be a danger to the region in which their establishment is contemplated; rather than a danger, such institutions are almost invariably an advantage.

In one county a plant costing $140,000 is projected, but very costly institutions are not advocated; all that is insisted on is that for "tuberculosis hospital" one shall not read "almshouse." It is held that the county's sick consumptives should not be expected to tenant institutions of the latter nature. The number of beds would be computed as two-thirds the average of tuberculosis deaths in the county, the cost of construction about $500 per bed, and the maintenance about $1.25 per day for a patient. The expenditures (which are to be met by the taxpayers of the respective counties) would be insignificant in comparison with the sums the public pays for good roads and the erection and maintenance of armories, orphan asylums, jails and prisons. Besides, money put into the county tuberculosis hospital would help to close up many an almshouse and many an orphan asylum; for this disease (the most deadly in the most productive period of human existence) is one of the greatest causes of pauperism, and probably the greatest single cause of orphanage.

Current Comment

MEDICAL IMPORTANCE OF PANAMA

On the completion of the Panama Canal, there will be a readjustment of routes of commerce and travel, which will radiate from the canal to all parts of the world. The western coast of Central and South America will then constitute a definite sanitary menace to the United States. Close contact by ship with the ports where yellow fever, cholera and small-pox are almost endemic, not to mention a host of other infectious diseases, will expose our Atlantic and Gulf ports to the constant peril of epidemic invasion. It will probably fall to the Public Health Service to provide against this new danger. The present quarantine service embraces a chain of fifty-three stations encircling the United States, New York being the only important port not covered by the federal service. The Public Health Service also includes Porto Rico and Hawaii in its quarantine protection, and administers the quarantine of the Canal Zone. The maritime traffic which will converge at the Canal Zone will bring with it large numbers of sailors of all the nations, including the United States, and a medical relief station will be necessary. A large marine hospital should be erected at some favorable location in the Canal Zone, either at sea-level or in the mountains; it would find a large and increasing field of usefulness, and in fact will be almost a necessity. Out-patient offices at Colon and Panama should be equipped for emergency and ambulance cases, and as receiving stations for the marine hospital. There is a unique opportunity in the Canal Zone for the establishment of a laboratory for the investigation of tropical and subtropical diseases. The clinical material which will be available from all parts of the world, especially from Central and South America, will afford opportunity for valuable studies of diseases which will soon be even a greater national menace than at present. Such an institution, associated with the suggested hospital or working in cooperation with it, would supply a definite need in the advancement of American medical science.

A POSSIBLE FALLACY IN TESTING DIABETIC URINE

A letter was recently received from a subscriber who described himself as an elderly man afflicted with diabetes mellitus. He stated that he had tried various remedies, and had even been led to use a widely advertised nostrum, which he was convinced was doing him good, because the amount of sugar in his urine was greatly reduced. In reply it was suggested to him that the medicine he was taking was a diuretic, increasing the amount of urine, and that instead of helping him was probably doing him harm. It was further suggested that instead of testing one specimen of urine, as he evidently had been doing, he take the quantity for twenty-four hours, and test it. His next letter stated that an examination of a twenty-four-hour specimen showed that, instead of decreasing, the sugar had actually increased. On several occasions case reports have been submitted in which it was evident that the medical attendant had adopted the method of testing employed by the physician mentioned above; that is, he had tested a single specimen instead of the total for twenty-four hours. In the present case, the diuretic had increased the quantity of urine in twenty-four hours; hence any single specimen contained proportionately less sugar.

THYROID EXTRACT IN BRIGHT'S DISEASE

While many remedies have been tried in Bright's disease, generally to be discarded after a period of enthusiastic application, it is a singular fact that until recently no use seems to have been made of thyroid extract in the treatment of diseases of the kidney. Probably the fact that thyroid extract increases the nitrogenous waste and that in some cases it causes the appearance of albumin in the urine has deterred therapeutists from resorting to a trial of this remedy, for fear of injuring the kidney instead of benefiting the patient. The use of thyroid extract in cases of eclampsia of pregnancy should not be held to warrant the conclusion that it will be useful in ordinary forms of nephritis, because the etiology and character of the kidney affections in pregnancy are quite different from those of ordinary nephritis. The occurrence of hyperthyroidism in certain cases of nephritis has been repeatedly noted. On the other hand, the cases of nephritis in which the thyroid is insufficient must be rare. In such cases it is possible that a cautious administration of thyroid extract might be beneficial. In this connection, Percy's experiences, as given in his article in this issue, are of special interest. This article announces a series of thirty-five consecutive cases, two

of which are reported in detail, in all of which Percy believes that the use of thyroid extract was of benefit. From what we know of the thyroid, we are naturally skeptical of benefit to nephritis from such an agent. While Percy's paper is worthy of the attention of the practitioner, we suggest that the number of cases is too few to justify an immediate acceptance of this method of treatment. It must be borne in mind that the author presents the matter merely as a preliminary report. Granting that thyroid extract may be beneficial in exceptional cases, it remains to be determined in what kind of cases such treatment may properly be used. Of course physicians will remember that so far as can be judged from its known properties, thyroid extract may do harm to the kidney diseased from ordinary causes. Until the cases likely to be benefited are more accurately determined, it should be used only after a careful study of the patient to determine the absence of conditions in which the remedy would be liable to do harm. If the treatment is determined on, we suggest the use of small doses cautiously increased.

HOOKWORM WORK IN KENTUCKY

A good issue of the *Bulletin of the Kentucky State Board of Health* is the one devoted to the hookworm, an active campaign against which by the dispensary plan has been conducted in that state during the past year. The life-history of the worm, its occurrence throughout the state and the ravages wrought by it are described, and the method of detection and details of treatment are given. The *Bulletin* also announces that Dr. Lillian H. South, state bacteriologist, has demonstrated that the eggs and larvae may be carried on the legs of flies, a fact which has been suspected for some time. The *Bulletin* is written so that it may be understood by the layman and is profusely illustrated with photographs of hookworm victims and conditions which foster the spread of the infection. It is a valuable publication and should have a wide circulation in districts where hookworm disease is prevalent.

Medical News

CALIFORNIA

New Hospital for Burbank.—The new hospital being erected at Burbank will be of reinforced concrete and practically fireproof, and will cost not less than $5,000.

Appropriation for State Hospital.—The trustees of the Stockton State Hospital have asked an appropriation of $900,000 for maintenance for the next biennium.

Leper Colony Planned.—The health officer of Los Angeles County proposes that a colony for the care of lepers should be established on San Clemente Island, off the coast of Southern California.

COLORADO

Gifts to Hospital.—The Jewish National Hospital for Consumptives received some valuable gifts, including the James E. Shoenberg Memorial, a well-equipped trade school, and the Dudley C. Shoenberg gift, a farm of sixty acres stocked with a herd of cattle and three thousand chickens.

Leper Transferred to Washington.—C. W. Bronson, the leper who recently escaped from a leper colony in California and was apprehended by Colorado officials and isolated in a tent near the Sand Creek Pest House six months ago, is to be removed to the Federal Colony for Lepers in the state of Washington.

ILLINOIS

Diphtheria Closes Schools.—Schools, churches and all public meetings at Wenona have been ordered closed by the State Board of Health because of the prevalence of diphtheria.

Personal.—Dr. Charles A. Potter, St. Charles, has been appointed a member of the committee of the Illinois State Charities Conference for medico-social work.——Dr. W. E. Guthrie, Bloomington, has been appointed district surgeon of the Chicago and Alton Railroad.——Dr. and Mrs. Henry C. Littlejohn, Farmer City, have gone to California for the winter.

Information Desired Concerning Dr. W. R. Ely.—Dr. W. R. Ely, Gibson City, disappeared on the night of October 29, while in Chicago, and it is feared that he has met with foul play. Dr. Ely is 33 years old, 5 feet 9 inches tall, and weighs 150 pounds; he is of dark complexion with brown hair and eyes, has a smooth face and a very good set of teeth, and wore a gray suit. Any information concerning the whereabouts of Dr. Ely should be sent to Mr. John J. Halpin, Captain of Detectives, Chicago.

Chicago

Hospital Notes.—A bazaar was held in the interests of the Norwegian Tabitha Hospital Society building fund, November 2, at the Humboldt Park Parish House.——The Englewood Hospital has had plans prepared for an addition to cost $50,000. The new building is to be erected on a lot adjoining the present hospital. Of the $50,000 required, about $5,000 has already been contributed and an appeal for the remainder has been issued by the trustees.——The Board of Education is said to be taking steps to establish a special school for epileptic children. This school will be expected to care not only for epileptics at present in the school, but for nearly three hundred others.

INDIANA

Health Exhibit in Terre Haute.—From October 29 to November 1, inclusive, a health institute was held in Terre Haute. The work of the institute included lectures given under the direction and management of the State Board of Health, assisted by local societies, and also a health exhibit consisting of moving pictures, charts and specimens, under the charge of Dr. Owens of the State Board of Health.

Personal.—Dr. W. A. Gekler, assistant superintendent of the State Tuberculosis Hospital, Rockville, has been elected superintendent pro tempore, vice Dr. H. B. Leavitt, deceased. ——Dr. J. O. Stellson, Indianapolis, has returned from Europe. ——Dr. Harvey A. Moore, Indianapolis, has resigned as medical director of the Indiana National Life Insurance Company. ——Dr. Walter N. Sharp, Indianapolis, is reported to be seriously ill at a local hospital.——Dr. C. B. Stemen, Fort Wayne, who has been seriously ill with bronchitis, is reported to have recovered.——Dr. W. F. Schrader, Fort Wayne, is ill at his home with septicemia, due to a post-mortem wound.——Dr. W. Y. Wells, Laketon, was painfully injured in a collision between his buggy and an Erie Railroad engine, October 17.

KENTUCKY

Personal.—Dr. J. N. Fireline, Owensboro, has resigned as city physician and has been succeeded by Dr. Alexander McKenney.——Dr. Forest Gabert, Louisville, was seriously injured when his automobile skidded and ran into a telephone pole, October 14.——The office building of Drs. John G. Foley and Tillman Ramsey, Pineville, was destroyed by fire October 14 with a loss of $7,000, partially covered.——Dr. Henry A. Cottell was elected president of the Louisville Literary Club, October 28.

New Officers for State Association.—At the fifty-seventh annual meeting of the Kentucky State Medical Association held in Louisville, October 29-31, the following officers were elected: president, Dr. David O. Hancock, Henderson; president-elect, Dr. William O. Roberts, Louisville; vice-presidents, Drs. James H. Hendron, Cary; Thomas C. Holloway, Lexington, and J. Paul Keith, Hopkinsville; delegates to the American Medical Association, Dr. Arthur T. McCormack, Bowling Green (reelected for the sixth term), and Dr. James W. Kincaid, Catlettsburg; councilors: first district, Dr. William W. Richmond, Clinton (reelected for fourth term); second district, Dr. Cyrus B. Graham, Henderson, and tenth district, Dr. Isaac A. Shirley, Winchester. Dr. T. Atchison Frazer, Marion, was elected as orator in medicine and Dr. Wilford E. Senour, Bellevue, orator in surgery. Bowling Green was selected as the meeting place for 1913.

LOUISIANA

Health Car Returns.—The State Board of Health car, presided over by Dr. Oscar Dowling, has returned from its trip to the east and is on inspection during the entire eight days of the State Fair.

Good Luck Day for Dispensary.—The board of trustees of the Women's and Children's Free Dispensary, New Orleans, has decided to hold a "Good Luck Day," November 16. The institution treats, free of charge, more than two thousand women and children a year.

Personal.—Drs. George K. Pratt, Jr., and J. W. Newman, New Orleans, have returned from Europe.——The house of Dr. I. B. May, Columbia, was burned October 22.——Dr. A. G. Darcental, White Castle, has been elected health officer of Iberville Parish, vice Dr. B. O. Le Blanc, St. Gabriel, resigned.

New Officers.—New Orleans Academy of Science, reorganized after a lapse of twenty-three years, October 17: president, William Berry Smith; secretary, R. S. Cocks.——Washington Parish Medical Association organized at Franklinton, October 16: president, Dr. H. C. Cole, Bogalusa; secretary-treasurer, Dr. J. L. Brock, Franklinton.

Supreme Court Sustains Dowling.—The Supreme Court of the state has sustained the State Board of Health in the case of A. R. Susslin, a baker of New Orleans, charged by the board with operating a bakery in violation of the rules and regulations of the board, which claimed that the bakery was so insanitary that it amounted to a public nuisance. The baker won his case in the civil district court whereupon the attorney for the state board applied to the Supreme Court.

MARYLAND

Baltimore

Bazaar for Widows' and Orphans' Home.—The managers of the Home for Widows and Orphans of Baltimore announce that the annual bazaar will be held in the Howard Street Armory, November 21-25.

Personal.—Dr. Charles F. Bevan has resigned as professor of surgery in the College of Physicians and Surgeons, Baltimore.——Dr. C. B. Gamble, Jr., was attacked by a negro burglar, October 28.——Dr. H. Barton Jacobs has returned from Europe.——Dr. Marshall L. Price, secretary of the State Board of Health, is ill with nervous breakdown in a hospital in Philadelphia.——Dr. Adolph Meyer, director of the Phipp Psychiatric Clinic, was the guest of honor at a dinner given by D. Allen Willey, at the Baltimore Country Club, October 16. ——Prof. Carl Von Noorden, of the University of Vienna, lectured at Johns Hopkins Hospital, November 2, on "The Principles of Treatment of Diabetes Mellitus."——The Faculty of Physic of the University of Maryland gave a dinner to Prof. Randolph Winslow at the University Hospital, October 22, and not to Dr. John Randolph Winslow, as was announced in THE JOURNAL, November 2.

MISSISSIPPI

Health Day.—Health Day is to be observed in the public schools throughout Mississippi, November 20. The program has been arranged by Miss Susie V. Powell, supervisor of the School Improvement Association in cooperation with the State Board of Health.

Economic Loss From Preventable Diseases.—The State Board of Health announces in its exhibit at the State Fair that the economic loss of Mississippi in deaths from preventable diseases amounts to $20,500,000 a year. The statistics show that the annual loss from tuberculosis in the state is $11,586,250, and that from typhoid $2,334,500, and these figures do not include the easily preventable and common diseases.

NEW YORK

Hospital Items.—The first building of the Syracuse Hospital for Contagious Diseases is to be the mixed infection building, which is to cost about $12,000, and will be practically fireproof.——At the annual meeting of the Cohoes Hospital Association, October 15, Drs. James H. Mitchell and J. L. Archambault were elected trustees.——At the annual meeting of the Ithaca Hospital Association, Drs. A. T. Kerr, Eugene Baker, C. P. Biggs, H. B. Besemer and I. M. Unger were elected trustees.——The Mountain Sanatorium, Binghamton, reopened October 28. Drs. Joseph J. Kane, Charles A. Squires, J. S. Kelley, S. B. Blakely, George H. Fox, F. M. Miller, C. A. Ward and A. S. Chittenden will take turns as attending physician. ——On the closing of the Summer Tuberculosis Camp near Huntingtonville a winter hospital for tuberculosis was opened in Watertown.

New York City

Personal.—Dr. Anthony Bassler has been appointed clinical professor of medicine in the New York Policlinic Medical School and Hospital.——Dr. Harry T. Summersgill has been appointed superintendent of the Cincinnati City Hospital.

Minturn Hospital Announcement.—This institution, which cares for diphtheria and scarlet fever patients, has sent out an announcement stating that physicians who send patients to this hospital are requested to visit them and direct the treatment.

Hospital Clinic for Defectives.—The Clearing House for Defective Children was opened October 22, in the Post-Graduate Hospital by Dr. Max G. Schlapp. Children sent by various city departments and private charities to this clinic will be examined and treated on every week day excepting Monday.

Appeal for St. Rose's Home.—The Servants of Relief for Incurable Cancer have made an appeal for financial aid to complete and furnish the new St. Rose's Free Home for Incurable Cancer. The building is nearly finished at a cost of $91,000. For minor contracts, furnishings and provisions, $25,000 more is needed, and at present a mortgage of $45,000 is on the home.

Vessels Cannot Dock at Night.—Dr. Joseph O'Connell announces that the ruling of the health officers of the Port of New York that no vessels will be passed after sundown will be permanent. He says this is a matter concerning the health of the nation, and not the convenience of passengers; that it is impossible to examine a large number of persons at night by artificial light satisfactorily, and that examinations can be made more thoroughly and speedily in the morning. The staff of health officers has been increased and five now board each vessel at Quarantine.

Pediatric Clinics.—The section on pediatrics of the Medical Society of the State of New York has arranged a series of pediatric clinics to be held in New York City, November 14. From 10 to 11 a. m. there will be a clinic at the Post-Graduate Hospital, conducted by Drs. Chapin and Pisek. From 11:30 to 12:30, Dr. L. E. Le Fetra will conduct a clinic in the children's ward of Bellevue Hospital. At 1 p. m. luncheon will be served at the Policlinic Hospital and from 1:30 to 2:30 Dr. Charles G. Kerley will give a clinic at that institution. From 3 to 4 p. m. there will be a clinic at the Babies' Hospital, conducted by Dr. L. Emmett Holt, and from 4:30 to 5:30 Drs. Koplik and Heiman will hold a clinic in the children's ward of Mount Sinai Hospital.

Hospital Standards and Supplies.—At the end of the third year, the Hospital Bureau of Standards and Supplies Association, conducted by a group of private hospitals in the interest of economy and higher efficiencies, reports successful and satisfactory results. Each hospital sends requisitions directly to the suppliers under the agreements, receives invoices direct, and is liable only for its own purchases, which it pays for directly to the suppliers. The standards recommended, based on the interchange of information regarding practice, quality and experience, have an educational value, which should be considered in addition to the economies secured. While each institution preserve its autonomy, the extent to which the members cooperate in supplying information, in using the agreements secured, in advising on questions of practice, measures the advantages to the members and the success of the bureau. This cooperation is the essence of the association. The committee is convinced from the benefits secured to members that the extension of the work of the bureau would be desirable for other hospitals, and recommends superintendents and officers who are interested in cooperation and higher efficiency to visit the offices of the bureau at 381 Fourth Avenue for further information.

Wants Hospitals and Medical Schools United.—Chancellor John H. MacCracken of New York University, in his report for 1912, predicts that New York will share the same fate as London as a medical center, unless the hospitals and medical schools pursue a different policy. He urges control of medical and laboratory work in the municipal hospitals of the city by the university medical schools. He finds at present a decreased cooperation between the municipal hospital and the medical school which he considers a distinct menace to both. Dr. MacCracken also criticizes the control of visiting physicians and surgeons by a board of trustees, and urges that a definition of their privileges and appointments be placed in the hands of the university faculties. He would place the appointments and control of the force of each municipal hospital in the hands of those who hold the chairs in the medical faculty of the school connected with that hospital. To do this the university should be able to provide a salary sufficient to make teaching, research

and the conduct of a hospital ward the main issue, and private practice secondary. He continues: "If, however, the university cannot furnish a complete career for the teacher of medicine, it is of immediate importance that positions should be created in the medical world which, in opportunities for public service, in dignity and permanency of tenure, shall compare favorably with judgeships and bishoprics."

NORTH CAROLINA

New Hospital Opened.—The management of the Roanoke Rapids Hospital announces that the institution is now opened for the treatment of all surgical and non-contagious medical diseases.

Registration System Needed.—Dr. W. S. Rankin, Raleigh, secretary of the State Board of Health, recently elected chairman of the section on vital statistics in the American Public Health Association, with his associates, is working to secure the enactment by the next legislature of a complete system of registration for the state outside of towns and cities in which there is registration at present.

Personal.—Dr. J. W. Willcox, Carthage, has been appointed assistant physician at the State Hospital for Tuberculosis, Montrose.——Dr. J. P. Turner, Greensboro, has been elected medical director of the Jefferson Standard Life Insurance Company, vice Dr. Albert Anderson, resigned. Dr. Anderson will open an office in Raleigh.——While making a night call in Wilmington, Dr. F. W. Avant, a colored physician of Wilmington, fell through a railroad bridge, sustaining serious injuries. ——Dr. E. E. Stewart has resigned as professor of anatomy in the Wake Forest Preparatory College of Medicine and will remove to New York City. He has been succeeded by Dr. Edwards S. Ruth, New York City.——Dr. and Mrs. J. M. Belk and daughter, Monroe, have returned from Europe.

OREGON

New Medical Office Building.—A medical and dental building will probably be erected at Seventh and Morrison Streets, Portland, ten stories in height and of reinforced concrete. The upper eight floors will be exclusively for physicians and dentists.

New Staff for Physiologic Laboratories.—The University of Oregon Medical College announces that Dr. John Matthew Connolly, formerly of Harvard Medical School, has begun work as professor of chemical physiology and as physiologic chemist in the Portland Physiology Laboratories. The personnel of the staff also includes Dr. John D. MacLaren, director; Dr. Horace Fenton, clinician, and Dr. Mary V. Madigan, anesthetist.

Private Versus State Sanatoriums.—The Oregon Board for General Supervision of State Institutions recommends that the State Tuberculosis Sanatorium be abolished and that persons suffering from tuberculosis be cared for in private sanatoriums. It is proposed that the state pay a certain amount, say $25 per month, for each patient in a private institution and furthermore that the tuberculosis board shall examine such institutions. The Oregon Sanatorium has an annual appropriation of $25,000 and the complaint is made that the per capita cost of maintenance is too high.

PENNSYLVANIA

Personal.—Dr. D. A. Arter, Greensburg, celebrated his eighty-fourth birthday, October 26.——Dr. W. H. Robinson, secretary of the Pottsville Board of Health, is reported to be ill at his home.

Appropriation Asked for Criminal Insane Hospital.—The board of trustees of the State Hospital for the Criminal Insane, Fairview, have decided to ask for an appropriation of two million dollars from the legislature for the completion of buildings, their equipment and maintenance.

Sanatorium Accepted.—Health Commissioner Dixon, on October 24, formally accepted in behalf of the state, the new building at the Cresson Sanatorium, to be used as an administration building. The dining hall and vestibule will be finished in a short time, and it is expected that the institution will be ready to receive patients in less than a year.

Railway Fatalities Increase.—According to the report of the State Railroad Commission for the months of July, August and September, there were 34 more persons killed and 673 more injured than during the same period last year. The number killed was 300—90 employees, 20 passengers, 160 trespassers and 30 others. The number injured amounted to 2,977—2,300 employees, 302 passengers, 212 trespassers and 133 others.

New Officers.—Somerset County Medical Society at Rockwood: president, Dr. Bruce Lichty, Meyersdale; secretary, Dr. G. C. Berkheimer, Windber.——Medical Branch of the Johnstown Chamber of Commerce, October 24: Drs. L. M. Gurley, Henson; F. Tomb, and Eugene D. Geer, Edinboro, executive committee.——Green County Medical Society at Waynesburg, October 23: president, Dr. H. C. Scott; secretary, Dr. R. E. Brock, both of Waynesburg.

Hospital Items.—Bethany Hospital, attached to the Bethany Orphans' Home, Womelsdorf, erected at a cost of about $9,000, was formally dedicated October 10.——Residents of the Chartiers Valley are making a campaign to raise $100,000 for the erection and equipment of a new Chartiers Valley Hospital.—— The Board of Health of Harrisburg is confronted with the necessity of an isolation hospital. The only accommodation at present in the city for communicable diseases is the isolation pavilion at the Children's Industrial Home.——At a meeting of the staff of the West Side Nesbitt Hospital, Wilkes-Barre, for organization October 21, Dr. W. H. Faulds was elected president and Dr. D. H. Lake, secretary-treasurer.

Contagious Diseases.—Since the first of August 70 cases of typhoid have been reported in Norristown and Chief Medical Inspector B. Franklin Royer, of the State Health Department, has been sent there to investigate.——Although the total number of cases of typhoid at Troy has reached 184, no new cases have been recently reported and it is hoped that the epidemic has run its course. On October 28, a clinic was held at the Emergency Hospital for free typhoid vaccinations. The investigation of the causes made by the State Health Department shows that the epidemic is due to a typhoid case on a farm near the headwaters of Sugar Creek, from which the town receives its water supply.——Three new cases of diphtheria were reported during the week ending November 2, at Lewistown, one being an instructor of music in the high school. All the schools, churches and theaters have been ordered closed. ——During the last month, nearly 100 cases of measles have developed in Fleetwood borough, near Reading. At a special meeting of the School Board of Fleetwood, October 29, it was decided to close all schools for three weeks.

Philadelphia

Scotch Scientist in Philadelphia.—Sir William Ramsey, K.C.B., LL.D., F.R.S., of Kings College, Aberdeen, read a paper on "Electrons" before the American Philosophical Society, November 1. He was the guest of honor at an informal dinner given by Dr. William W. Keen, before the meeting of the society.

Charity Ball Beneficiaries.—The thirty-third annual charity ball will take place December 19, at the Academy of Music and the beneficiaries are: The Children's Aid Society of Pennsylvania; Jefferson Hospital Roof Garden for Pneumonia; Policlinic Hospital and the gynecologic ward of the University Hospital.

Personal.—Dr. W. G. Turnbull, for three years in charge of State Tuberculosis Dispensary 107, has been appointed medical director of the State Tuberculosis Sanatorium, Crescent. ——Dr. E. A. McClaine has been appointed resident physician in the Scranton State Hospital.——Dr. Charles D. Fox has returned from abroad.

Reorganization of Dispensary Staff.—The University of Pennsylvania Hospital Medical Dispensaries have been reorganized and the staff at present consists of Dr. M. H. Fussell, consultant; Dr. Frederick H. Klaer, chief of staff, and Drs. A. A. Howell, S. J. Repplier, T. C. Kelly, J. H. Musser, Jr., H. I. Goldstein, Camden, N. J., H. M. Wise, A. Bowen and Holt.

Large Appropriation Asked.—The Health and Charities Department has asked councils to make an appropriation of $6,151,704 for maintenance of the respective bureaus during 1913. Three million dollars of this appropriation is asked for buildings for the insane at the new site on Byberry Farms; $150,000 for the building for the pathologic laboratory; $500,000 for the building for the female indigent; $25,000 for the employment of fifty outdoor physicians, and $500,000 for the erection of a hospital for the treatment of contagious diseases.

Hospital News.—The first of the group of buildings for the Children's Hospital at Bainbridge, Eighteenth and Fitzwater streets, will be an outpatient structure. The site for the new hospital is an area of more than one and one-half acres. The proposed buildings will cost about $500,000 and this, with the endowment fund, will represent a total investment of more than one million dollars.——Nearly $10,000 has already been raised for the Abington Hospital to be erected on Highland Avenue in that suburb. When $100,000 has been pledged,

erection of the buildings will be commenced.——On October 28 the University of Pennsylvania opened a new dispensary in connection with its maternity.——The West Philadelphia Hospital for Women offers to women medical students of the senior class of any regular medical college of Class A the privilege of serving as student assistants to the interns throughout the year.

WISCONSIN

Hospital and Sanatorium Notes.—Dr. J. J. McShane, commissioner of public health of Kenosha, announces the urgent need of an isolation hospital in that city.——At the next meeting of the school board of Milwaukee, Chief Medical Inspector Dr. George P. Barth will submit a plan for the establishment of a school for crippled children, of which there are said to be 137 in the city.——The contracts for the construction of the Sunny Rest Tuberculosis Sanatorium to be erected by Racine County near the county insane hospital, have been awarded to contractors of Burlington.——The supervisors of Grant County have accepted the bid of Monroe contractors of $104,562 for the construction of an insane hospital to replace the building recently burned.——The Sisters of Misericorde, Milwaukee, have instituted a campaign to raise $60,000 for the erection of a new Misericordia Hospital.

Personal.—Dr. Earl L. Baum has been appointed resident surgeon of the Good Samaritan Hospital, Milwaukee.——Dr. Joseph P. McMahon, Milwaukee, has been appointed chairman of the standing committee on health of the Central Council of Philanthropies.——Dr. H. C. Maurer, Beloit, was operated on for appendicitis in the Beloit Hospital, October 26.——Dr. E. F. Woods, Janesville, who was operated on for appendicitis in the Augustana Hospital in Chicago, is reported to be making steady progress toward recovery.——Dr. Joseph Williams, Green Bay, has been appointed house physician of Emergency Hospital, Milwaukee, vice Dr. George T. Hegner, resigned.——Dr. J. W. Coon, Wales, has been appointed a member of the committee of the Wisconsin Antituberculosis Association to make further study and recommendations in the matter of utilizing the forest reserves for the employment and treatment of convalescent consumptives.——Dr. C. F. King, Hudson, was thrown from his buggy, October 10, in a collision with an ice wagon, fractured his clavicle and suffered internal injuries.——Dr. F. B. Hoermann and family sailed, October 23, for Honolulu.——Dr. E. C. Pratt, Kewaunee, has assumed his new duties at the Kankakee (Ill.) State Hospital.——Dr. Samuel Bell, who has been ill in his home in Beloit, is reported to be improving.

CANADA

Personal.—Dr. George L. Clark has succeeded the late Prof. J. Stewart Dickey as lecturer on practical anatomy in the Western Medical School, London.——Dr. W. C. Swenerton, Fort George, B. C., has been appointed medical health officer of the Grand Trunk Pacific System with jurisdiction over territory from Fort George to Frazer Lake.

Hospital News.—The board of management and guild of the Ottawa Maternity Hospital held a tea and sale October 24, the proceeds of which are to be applied to the additional wing required for the institution.——At the annual meeting of the Niagara Falls General Hospital Trust, it was decided to ask a city architect to submit sketches for an additional wing to the hospital to cost about $30,000. This wing will be built from the proceeds donated to the hospital by the late Susan Thompson.

Tuberculosis Campaign.—The offer of the Royal Edward Institute for Consumptives, Montreal, to donate $100,000 toward a site and building to be used for advanced cases of tuberculosis is still open provided the city and province subscribe their share toward the maintenance of the institution. For the maintenance of the hospital, $20,000 a year is required, of which the city and province are asked to furnish $7,000 each.——An antituberculosis league has been organized in Saskatchewan. A site for a sanatorium has been selected near Fort au'Appelle and 230 acres of land have been bought and paid for. Dr. William Hart has been elected superintendent of the institution.

German Physicians in Canada.—The German Central Committee for Physicians' Study Travels visited Toronto October 3, and were entertained by the municipality and the University of Toronto and the Academy of Medicine. The entertainments included a reception at Convocation Hall, of the University of Toronto, where the committee was received by President Falconer on behalf of the university and Dr. R. A. Reeve on behalf of the Academy of Medicine. Dr. Rudolph Lennhoff of the University of Berlin responded to the address of welcome.——At a dinner given by the city of Toronto, the mayor and Dr. Gerhard Heintzman welcomed the guests, and Professors His of the University of Berlin and Loeffler of the University of Greifswald responded on behalf of the guests.——The visiting physicians were also welcomed by the medical profession of Montreal, October 5. After visiting the Royal Victoria and general hospitals they were given a reception in McGill University, and in the evening the Montreal Association of Physicians and Surgeons welcomed them in a reception at the Hotel Windsor.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Oct. 18, 1912.

Local Treatment of Vincent's Angina by Salvarsan

At the meeting of the Academy of Medicine, October 8, Dr. Achard, professor of pathology and therapeutics at the Paris Faculté de médecine, read an interesting paper on this subject. The success of salvarsan in syphilis suggested the use of salvarsan in diseases caused by other spirochetes than the *Spirochæta pallida*. Ehrlich, Rumpel and Gerber reported cures of Vincent's angina by the intravenous injection of salvarsan. As Vincent's angina is a local affection and as the intravenous injection of salvarsan is not without danger, Achard treated a patient with local applications in the throat. He selected an especially severe case which had been under observation since last year; the velum of the palate was deeply ulcerated and the uvula had been destroyed; customary treatment had been of no avail. Salvarsan was applied, first in solution and then in powder. Improvement was noted at once and cicatrization took place quickly. In another case of angina the third day, the two tonsils had a sanious and offensive coating, the ganglia were congested and the neck was edematous. Diagnosis was verified by microscope; applications of salvarsan in glycerin were commenced and repeated three times a day with no other treatment. After four days the cure was complete. This treatment is all the more valuable in Vincent's angina as the disease is often long-continuing and rebellious to ordinary means. It is advantageous to verify the clinical diagnosis with the microscope. The differential diagnosis between Vincent's angina and syphilis is sometimes difficult; a trial treatment with mercury might be dangerous, and Möller has even seen angina become gangrenous and fatal following it. With the local application of salvarsan no risk is run; in Vincent's angina there is every hope for a rapid cure. If there is a question of syphilis the treatment would be advantageous in combating an additional spirochetal infection, and according to some authors it would do some good in syphilitic lesions, primary, secondary or tertiary.

Other local infections due to spirochetes are sometimes curable by this local treatment, especially mercurial and ulceromembranous stomatitis, several ulcerative conditions of the buccal cavity, necrosis of the dental pulp and noma, a lesion of the most serious kind. This simple treatment is free from danger and can be employed by every practitioner.

Suicide Statistics

The number of suicides, which in 1901 was 8,818 (6,809 men and 2,009 women), has been increasing, especially since 1905, until in 1910 it was 9,819. This number is evidently less than the total number of suicides, for without doubt many suicides are never noted by the authorities. The suicide rate is 25 per hundred thousand. This is three times what it was seventy years ago (9 per hundred thousand in 1840, 17 in 1880, 22 in 1900). The mean number was exceeded in 1910 in twenty-six departments. The 9,819 suicides in 1910 comprised 7,476 men and 2,343 women, or 34 per hundred thousand males and 12 per hundred thousand females. Frequency of suicide increases with the advance of age and the maximum is reached among the old; but the rate is increasing among children less than 16; the annual mean from 1901 to 1905 was 60 and from 1906 to 1910 was 80. Widowers do not take a prominent place in the total number of suicides but advance to first position if considered according to the census enumeration. Their suicide rate is 163 per hundred thousand, about three times that of bachelors. Widows and divorced women show a tendency to suicide, but to a less degree than widowers and divorced men. Among 9,282 suicides whose home was known, 4,968, or 54 per cent., lived in the country and 4,314, or 46 per cent., in the city. The rate in the country was 21 per hundred thousand and in the city 26. Servants of both sexes committed suicide oftener than persons employed in other ways, and members of the professions come next. Spring and summer are the favorite seasons for committing suicide. Physical suffering accounted for 21

per cent. of the suicides, mental disease for 15 per cent., unhappiness and ill fortune for 13 per cent., drunkenness for 12 per cent., domestic misfortunes for 9 per cent., disappointment in love for 4 per cent., misconduct for 2 per cent., and other motives for 24 per cent.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Oct. 18, 1912.

The Annual Meeting of the Organized Profession in Germany

The annual *Aerztetag* will not be held this year, as the most important matter to be discussed, namely, the readjustment between physicians and the Krankenkassen according to the imperial insurance law is not yet ready for discussion. This resolution of the executive committee of the Aerztevereinsbund indicates to what extent the economic interests of the German physicians are predominant at the present time, for, without doubt, there are a number of other important questions which might have been sufficient to justify the calling of a meeting.

The Medical Member of the Berlin City Council

The years of effort on the part of Berlin physicians to secure representation of the interests of the medical profession, and especially of public health matters, by a regular member of the municipal government of the metropolis, have been, after many difficulties, at last successful. The board of aldermen over a year ago made the proposal to the municipal government to appoint a salaried municipal medical councilor, with the right to sit and vote in the council, and the council has now finally acceded to this proposal. This fact justifies the assumption that the difficulty which stood in the way of the fulfilment of our desires was solely due to the former mayor, who resigned his office in the middle of this year. If the new mayor will show a similar understanding and interest in the other wishes of the Berlin medical profession, we may be quite satisfied with the change in the personality of the head of the city. Now we must wait with anxiety to see who will be chosen for this very important position, which in the extent of its functions and according to its salary is equal to that of a cabinet minister. Surely this man must be conversant with all questions of public-health matters, and this is not a small requirement.

A Prince-Physician

One of the Bavarian princes, as many of your readers may possibly know, "honored" many years ago our science and our profession by the fact that he adopted the medical career. After a regular education he settled in Munich as a surgeon and is in active practice (which has not been a great success, according to some). More in consequence of his ancestry than of his scientific importance, he has been elected an honorary member of different distinguished societies. But these societies will not be very much edified by their honorary member, since lately things have repeatedly come to our notice in regard to the princely colleague, which have excited a quite unpleasant attention in medical circles. Two such circumstances are to be noted within the last few months; they throw a striking light on his interest and intelligence in medical affairs. The *Gesundheitslehrer*, a well-edited journal devoted to the campaign against quacks and patent-medicine swindles, published a notice that a book written by Dr. Hey, the discoverer of Rad-Yo (a disreputable nostrum of the worst sort) was dedicated to his royal highness, Prince Dr. Ludwig Ferdinand of Bavaria, with his hearty consent. The editor then received a communication from a Munich attorney on behalf of the prince, in which it was stated that Dr. Hey solicited the prince for the acceptance of the dedication and that the latter, without having any knowledge of the contents of the book, had given his consent, after Dr. Hey said that he had practiced for a long time in the tropics. While one might be astonished at the remarkable naïveté evidenced in this matter and its public confession, one's wonder will be still increased by a publication which followed shortly after that which has been referred to. The manufacturer of Rad-Yo and Amol (a certain Wasmuth in Hamburg) has repeatedly been convicted on the ground of fraudulent advertisement which he had carried on with the use of Professor Kouwer's name; he asserted in his circular that Professor Kouwer had used Rad-Yo at the delivery of Queen Wilhelmine of Holland, and had thereby facilitated the childbirth. Wasmuth recently published a circular in which he stated that Prince Ludwig Ferdinand of Bavaria had shown great interest in the obstetric remedy Rad-Yo. He had received Wasmuth several times at his castle so as to secure thorough information regarding the remedy and to order several bottles of it. As a striking evidence of the interest that the prince showed in the remedy, and surely also an indication of his respect for the fraudulent manufacturer, the prince gave him his picture with the inscription "To my dear Mr. Wasmuth for constant pleasant remembrance of Dr. Ludwig Ferdinand." It must be a great satisfaction to the prince that this picture, together with his autograph, is published in the advertising circular. It is to be hoped that the district medical association of Munich, or the Munich Aerztekammer, will take the occasion to explain the principles of ethics to their princely colleague as plainly as they would to colleagues of a lower rank who sin against professional interests, so that such an objectionable circumstance will not occur again on the part of the princely colleague.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Oct. 20, 1912.

The Balkan War and the Austrian Profession

The war which broke out in the southern part of this country makes itself felt here in a most unpleasant manner. Not only is political tension marked, but also the supply of the daily markets is suffering. We import a large amount of foodstuffs from the Balkan States, especially eggs and meat. These articles are now seriously cut down. Furthermore the medical organization of the Balkan armies is rather poor. The papers here are filled with horrible news about the lack of provisions for the wounded and numerous physicians have volunteered to render medical service at the front. The Austrian Red Cross has sent eight physicians with seventeen nurses together with equipment for a field hospital to Montenegro, the nearest of the fighting states, while another staff of physicians and nurses will be sent soon to Servia and Turkey. The profession in this country includes a large percentage of Slavic physicians whose sympathy with their fighting compatriots called them to the battlefield at this serious time, with the result that there is now a lack of physicians in several frontier districts of Austria. In another respect also the profession is influenced by the war. Our army is being prepared for any possible contingencies, and the lack of medical men has led to the notification of every practitioner between the ages of 32 and 45, residing in Austria-Hungary, that he may have to render service at the field hospitals in case of war, regardless of the practice that will have to be given up.

An Outbreak of Paratyphus Infection in the Vienna Hospital Due to Bacillus-Carriers

Some time ago an alarming incident occurred in the Allgemeines Krankenhaus of Vienna. A large number of physicians, about eight hours after their dinner had been served to them in the common dining-room, complained of nausea, diarrhea, fever and general prostration; so did the nursing staff in various wards. In one medical ward the entire staff of nurses, numbering from eight to ten, were bedridden at the same time. The outbreak of gastro-intestinal disturbances was at first thought to be due to some kind of poison in the food, or to an unwholesome condition of the articles used in the hospital kitchen, where food is provided for about 4,000 people, comprising patients, staff, administrative officers and workers in the hospital. A thorough investigation was begun at once. It appeared that a few weeks previously a similar, though not so extensive occurrence, had taken place among the patients. The cases were few and scattered all over the wards. This time, however, over forty physicians, dining in the same room, were attacked while others were not, although they ate food prepared from the same material in the same kitchen; the same thing was observed with the nursing staff and the patients. No unwholesome condition was found in the kitchen and no metallic or other poison was discovered in the excreta or dejecta of the patients, who all soon regained their health. The kitchen staff was next thoroughly examined and after thousands of analyses by the chemical and pathologic departments the cause was found. Out of twenty-six persons examined, no less than four were bacillus-carriers, and the sickness was diagnosed as paratyphoid. The investigation was conducted by the government, and from the beginning it was decided to tolerate no bureaucratic interference. At present all precautions have been taken to prevent any further mischief through the employment of the persons who fell ill, and of course the bacillus-carriers will be treated as required. The investigation is still going on, for it is intended to have all persons concerned examined thoroughly. It is most likely that contamination took place after cooking, in making up the portions for the separate dining-rooms.

Marriages

CHARLES LEE FERGUSON, M.D., Somerville, O., to Miss Katherine Schoenling of Cincinnati, October 21.

ADRIAN VAN BRACKLIN ORR, M.D., Chester, Pa., to Miss Bish Beulah Lamb, at Tyner, N. C., October 17.

EARL ROGERS WHIPPLE, M.D., Steelton, Pa., to Miss Jean Isabelle Newlands of Buffalo, Pa., October 23.

CHARLES LEO O'NEILL, M.D., Newark, N. J., to Miss Helen Regina Gilligan of Orange, N. J., October 15.

LATHY L. YERKES, M.D., to Miss Cora Wright, both of Alton, Ill., at Edwardsville, Ill., October 15.

EDWIN N. BROWN, M.D., to Miss Gertrude Whitt, both of Arena, Wis., at Mazomanie, Wis., October 16.

RAY CLOSE WHITMORE, M.D., Quincy, Mich., to Miss Ethel Bradford of Ishpeming, Mich., October 23.

ELMER ALLEN MYERS, M.D., Burdett, Kan., to Miss Thirza Hope Fox of Lawrence, Kan., October 23.

HARRISON SMITH COLLISI, M.D., to Miss Anna B. Simpson, both of Grand Rapids, Mich., October 26.

HARRY TOULMIN, M.D., Philadelphia, to Miss Ruth Davis Sprague of Brookline, Mass., October 26.

CURTISS EUGENE MASON, M.D., Canby, Ore., to Miss Bertha Clement of Beaverton, Ore., October 14.

FRANK WALTON LARRABEE, M.D., Alton, Ill., to Miss Illa Smith, at Claremont, N. H., October 17.

JOHN WESLEY PARSONS, M.D., Benson, Neb., to Miss Eva Wicklund of Omaha, Neb., recently.

CADIS PHIPPS, M.D., Boston, to Miss Ruth Elizabeth Brock of Washington, D. C., October 21.

GEORGE M. LUCKEY, M.D., Vinton, Ia., to Miss Edna Black of Canton Township, October 10.

SIMON FRANKLIN WADE, M.D., to Miss Elsie R. Mawha of Newark, N. J., October 16.

FREDERICK BINDER, M.D., to Miss Emily DeCou, both of Corning, Ia., October 23.

FRANK W. VAN KIRK, M.D., to Miss Vera Wilcox Leighton, in Chicago, October 17.

DAVID M. BROWN, M.D., to Miss Rose Freund, both of New York City, October 15.

BYRON E. BIGGS, M.D., Flint, Mich., to Miss Walt of Carson City, Mich., recently.

Deaths

Major-General Robert Maitland O'Reilly, surgeon-general, U. S. Army, retired; a member of the American Medical Association; died in Washington, D. C., November 3, from uremia, aged 67. He was born in Philadelphia, Jan. 14, 1845, and was graduated in medicine from the University of Pennsylvania, Philadelphia, in 1866; two years prior to that time he was appointed a medical cadet in the U. S. Army and served during the latter part of the Civil War. On May 14, 1867, he was commissioned assistant surgeon, U. S. Army, and was promoted to colonel in 1902. He was appointed surgeon-general with the rank of brigadier-general Sept. 7, 1902, reappointed Sept. 7, 1906, and was retired with the rank of major-general Jan. 14, 1909, on attaining the age of 64 years. He took part in the expeditions against the Sioux Indians in 1874 and 1891. In 1884, while attending surgeon in Washington, Colonel O'Reilly was assigned to the White House as personal physician to President Cleveland. During the Spanish-American War he was chief surgeon of the First Independent Division and later chief surgeon of the Fourth Army Corps at Tampa. During General O'Reilly's service as surgeon-general the reorganization of the medical staff into the Medical Corps of the Army was accomplished, the Medical Reserve Corps was established, contract surgeons were abolished and anti-typhoid inoculation was introduced in the Army. During his service in Washington he was a member of the board of directors of the Columbian Hospital, consulting surgeon to the Providence Hospital, a member of the board of commissioners of the Soldiers' Home and president of the central committee of the American National Red Cross. After his retirement he resided for a time in Oswego, N. Y., but soon returned to his old home in Washington

Arthur Tracy Cabot, M.D. Harvard Medical School, 1876; a well-known surgeon of Boston; died at his home in that city, aged 60.

He was born in Boston, the son of Samuel and Hannah Lowell (Jackson) Cabot, and received his A.B. degree from Harvard in 1872. After postgraduate medical studies in Vienna and Berlin for two years he returned to Boston and was given his A.M. degree by his alma mater. His practice was not entirely confined to surgery. He was consulting surgeon to the Massachusetts General Hospital, the Children's Hospital and the New England Hospital for Women and Children, and was chairman of the Massachusetts Commission on Hospitals for Consumptives. He was a member of the American Medical Association, once president of the Massachusetts Medical Society, a fellow of the American Surgical Association and a member of the American Association of Genito-Urinary Surgeons and the Boston Society of Medical Science. He was also honorary president of the American School Hygiene Association, a trustee of the Boston Museum of Fine Arts and a fellow of the American Academy of Arts and Sciences.

William Frederick Dudley, M.D. Long Island College Hospital, Brooklyn, 1886; a member of the American Medical Association, American Rhinological, Laryngological and Otological Association and Associated Physicians of Long Island; adjunct clinical professor of diseases of the throat and nose in his alma mater, and chief of clinic in the nose and throat department; consulting laryngologist to St. Christopher's and the Norwegian hospitals; laryngologist to the Brooklyn and St. John's hospitals and associate laryngologist to the Long Island College Hospital; died at his home in Brooklyn, October 22, from septicemia, aged 50.

Charles Harris, M.D. Louisville Medical College, 1880; a Confederate veteran, the first practitioner to settle in Muskogee, Okla.; local surgeon for the Missouri, Kansas and Texas Railroad; for several years physician on the Indian reservations at Fort Mohave and Parker, Ariz.; died at his home in Brushy Mountain, Muskogee, October 23, from disease of the stomach, aged 71.

John Oatts Reddie, M.D. University of Glasgow, 1884; formerly secretary of the El Paso County (Colo.) Medical Society but for six years a resident of Prince Rupert, B. C.; president of the Prince Rupert Medical Society, health officer of Prince Rupert; medical inspector of immigration for the Dominion at that port; died at his home, August 28, from carcinoma of the kidney, aged 54.

Charles William Oviatt, M.D. College of Physicians and Surgeons, Chicago, 1887; a member of the American Medical Association, American Surgical and Western Surgical associations; one of the best known and most skilled surgeons of the Northwest; respected, beloved and honored by all who knew him; died at his home in Oshkosh, Wis., October 30, from heart disease, aged 59.

William Quincy Huggins, M.D. University of Buffalo, N. Y., 1870; a member of the Medical Society of the State of New York; one of the oldest practitioners of Niagara County; surgeon of Battery E, First New York Volunteer Artillery throughout the Civil War; for 42 years a practitioner of Sanborn; died at his home, October 21, aged 70.

Sydney Howard Carney, M.D. Harvard Medical School, 1861; formerly of Boston; resident physician at the Massachusetts State Almshouse and a member of the staff of the Massachusetts General Hospital and the Boston Dispensary; died at the home of his son in Tompkinsville, Staten Island, October 22, from pneumonia, aged 75.

Herman B. Stadt Singer, M.D. University of Leipzig, Germany, 1893; a member of the Medical Society of the State of New York; for two years assistant medical examiner in the Buffalo Department of Health; died at his home in Buffalo, October 23, after a surgical operation, aged 48.

William B. Charles, M.D. University of Louisville, Ky., 1887; formerly president of the Kings County (Cal.) Medical Society; physician to the Kings County Hospital and health officer of Hanford; died at his home, October 18, from heart disease, aged 55.

John Allen Millhouse, M.D. Medical College of Georgia, Augusta, 1885; of Perry, S. C.; a member of the South Carolina Medical Association; was found dead at a hotel in Columbia, S. C., October 20, from accidental gas asphyxiation, aged 53.

Emma W. Moorehouse (license, Missouri, 1895); formerly of Appleton City, Mo., a member of the Missouri State Medical Association; died at her home in Sugar City, Colo., October 12.

Richard Mason Fletcher, M.D. University of Alabama, Mobile, 1894; formerly contract surgeon, U. S. Army, and assistant surgeon of volunteers during the Spanish-American War; for several years a practitioner of Chicago and chief surgeon of the Chicago Emergency Hospital; died at his home in Birmingham, Ala., November 2, aged 46.

Albert Frederick Hyde, M.D. Rush Medical College, 1882; formerly a member of the American Medical Association; for twenty-eight years a practitioner of Shelby, O.; died in Columbus, O., October 23, from post-melancholic dementia, aged 53.

Hiram L. True, M.D. Eclectic Medical Institute, Cincinnati, 1870; a member of the McConnelsville, O., Board of Health; died in a hospital in Columbus, October 22, from uremia, five days after an operation for prostatic hypertrophy, aged 67.

Joseph J. Jaches, M.D. University of Moscow, Russia, 1887; visiting physician to the Jewish Maternity Hospital, Manhattan, and a resident of Bath Beach, Brooklyn; died suddenly at his home, October 20, from cerebral hemorrhage, aged 52.

Edward Fleming Jeffries, M.D. Western University, London, Ont., 1909, and gold medalist of his year; assistant physician at the Hospital for the Insane, Hamilton, Ont.; died in that institution, October 17, from typhoid fever, aged 26.

Dennis F. Moss, M.D. Medical College of Ohio, Cincinnati, 1869; for 25 years United States pension examining surgeon at Winamac, Ind.; died at his home in that place, September 18, from empyema, aged 65.

Harry Frye Holt, M.D. Harvard Medical School, 1906; a member of the Massachusetts Medical Society and of the staff of the Worcester Memorial Hospital; died at his home in Worcester, about October 20.

William M. Millen, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1882; formerly principal of the Monmouth (Ill.) high school; died at his home in Omaha, October 22, from heart disease, aged 65.

William Johnson, M.D. Medical College of Ohio, Cincinnati, 1883; a member of the Ohio State Medical Association; was found dead in his office in Cincinnati, October 20, from heart disease, aged 56.

DeWitt Clinton Hunter, M.D. University of Buffalo, N. Y., 1873; a practitioner for more than fifty years; died at his home in Rochester, N. Y., October 21, from cerebral hemorrhage, aged 78.

Niel B. Gillies, M.D. Queens University, Kingston, Ont., 1871; formerly a practitioner of Pueblo, Colo.; died at his home in Tulsa, Okla., October 24, from carcinoma of the stomach, aged 74.

Edward P. Ford, M.D. Northwestern University, Chicago, 1896; formerly of Chicago; for ten years in the government employ in the Indian service; died in Valentine, Ariz., October 16, aged 38.

Frederick Werner, M.D. Northwestern University, Chicago, 1904; instructor in operative obstetrics in his alma mater; died at his home in Chicago, October 23, aged 31.

George Washington Nuckolls, M.D. Rush Medical College, 1881; a retired practitioner of Minneapolis; died at his home in that city, October 19, aged 69.

Bertram Eugene Thomas, M.D. Ohio Medical University, Columbus, 1895; died at his home in St. Marys, O., October 13, from locomotor ataxia, aged 42.

Erastus M. Ward, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1877; died suddenly at his home in Rosendale, Mo., October 21, aged 70.

Thomas E. Rinehart, M.D. Pulte Medical College, Cincinnati, 1885; died at his home in Roseville, O., October 19, from heart disease, aged 50.

George Eli Marshall, M.D. Detroit College of Medicine, 1897; of Peterboro, Ont.; died suddenly in that city, recently, from heart disease, aged 47.

Frederick O. Stoddard (license, Maine, 1895); a resident of South Berwick for twenty-five years; died at his home, October 15, aged 50.

John Nutting (license, Minn., 1884); died at his home in North Mankato, Minn., October 21, from carcinoma of the throat, aged 78.

Joseph Odilon Poitras, M.D. Victoria University, Coburg, Ont., 1890; died at his home in Ste. Cunegunde, Que., September 3, aged 47.

E. T. Parker, M.D. University of Nashville, Tenn., 1857; died at his home in Lafayette, La., about October 22, aged 78.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

AUBERGIER'S SYRUP OF LACTUCARIUM

That clause in the federal Food and Drugs Act which requires certain potent drugs to be declared on the label of the proprietary mixtures containing them has been responsible for clearing up many mysteries. Physicians have frequently wondered why they were unable to obtain from the syrup of lactucarium, U. S. P., the therapeutic results which they were able to obtain from a proprietary product known as Aubergier's Syrup of Lactucarium, sold by Fougera & Co. at an exorbitant price and put up in "patent-medicine" style. The milk-juice of lettuce once bore the reputation of being a soporific — a reputation that has been artificially maintained largely through the effects of the Aubergier preparation. With the advent of the Food and Drugs Act the secret of the soporific effect of the Aubergier product was explained — it contains morphin.

The practical difficulties of making a satisfactory syrup of lactucarium are not realized by most physicians. To such the following note, presented at a meeting of the Pennsylvania Pharmaceutical Association by Mr. Louis Emanuel, president of the Pennsylvania Pharmacy Board, will prove enlightening:

"Did you ever make a syrup of lactucarium direct from the crude drug? If you did, shake hands, and let me hail you as a brother, a brother pharmacist in fact worthy of the title. If you did not, I am sorry for you; you have missed something worth knowing.

"The *American Journal of Pharmacy* tells us that in 1851 'Aubergier cultivated lactuca and poppy on a large scale, in order to obtain lactucarium and opium. Please note the latter for further reference. In lactucarium he found lactucin, mannite, resin, cerin, asparmid, brown coloring-substance and oxalic acid.' In 1860 in the same publication, Proctor says: 'The attention of the medical practitioners has of late been turned to the syrup of lactucarium, and the preparation sold usually by apothecaries in this city is that known as Aubergier's, a French preparation, made by dissolving 30 parts of alcoholic extract of lactucarium in 500 parts of boiling water, straining the liquor and adding 15,000 parts of boiling simple syrup, which is kept boiling, and albuminous water added from time to time until it is clarified.' In '66, '77, '78, '82 and '84 various writers produced elaborate dissertations on the supposed improved methods of making this syrup, but not one has had the temerity of inquiring into the therapeutic value of this preparation, or to examine the French preparation to ascertain whence comes its vaunted superiority.

"The French, it is said, are an impressionable people, but they appear to have a limit; they do not take any chances on *plain* syrup of lactucarium. Theirs contains the added product, extract of opium. This implies a lack of faith in soporific properties of lactucarium, and displays a recklessness in regard to cost and labor.

"The National Dispensatory, fifth edition, says:

"The utility of retaining lactucarium as an official medicine is very doubtful. It may possibly be desirable as a hypnotic for very impressionable persons, with whom faith in a remedy supplies its want of intrinsic efficiency."

"The official modus operandi for making this syrup looks laborious, but the innocent-looking task of reducing the drug to a coarse powder is a revelation to the uninitiated.

"It was a hot day in July, and it took my 175-pound clerk and me all that day to reduce 50 gm. of lactucarium to a satisfactory condition. The stuff looked like old pieces of discarded rubber shoes, and it really appeared to act like rubber. After perspiring all day with the Pharmacopeia and iron mortar, imagine our disgust, if you can, on reading in the National Dispensatory the following:

"This alcoholic preparation of lactucarium is quite as valueless and more objectionable than the syrup of the same drug.

"Moral: Why pay $6.50 a pound for material that has no medicinal value, and is so hard to manipulate as lactucarium when decrepit rubber shoes are so cheap? You can have just

as much fun on a hot summer day in reducing the latter to a coarse powder with clean sand in an iron mortar as you can with the more expensive material."

One of the advantages claimed for ready-made prescriptions over the made-to-order variety, or even over pharmacopeial preparations, is that they are more elegant in appearance and less offensive to the nostrils and palate. This is the common experience of physicians who, having prescribed some ready-made mixture, wish to change the dose of one of its constituents and write a prescription or ask their pharmacists to prepare a similar preparation. The inability of the pharmacist to prepare a preparation even approaching the original in appearance, color or taste usually leads to increased confidence in the skill of the manufacturer of the proprietary and a correspondingly decreased belief in the pharmacist's professional attainments. But these conclusions, although natural, are based on false premises. As the proprietary did not have the composition declared on the label, a mixture based on the formula differed more or less widely from the proprietary it was expected to resemble.

A SHOTGUN PRESCRIPTION

The prescription that follows is an interesting sample of polypharmacy:

℞	Cascaræ evacuantis	ʒ iss
	Strychninæ sulphatis	gr. 1/4
	Sodii bicarbonatis	ʒ i
	Codeinæ sulphatis	gr. iv
	Caffeinæ citratis	gr. xx
	Sodii salicylatis	ʒ i
	Liq. potassii citratis	ʒ iss
	Misturæ Basbami	q.s. ad ʒ iv

M. et Sig: ℥i every three hours, in water.

The patient who has this complicated prescription prepared for him will have the somewhat melancholy satisfaction of knowing that the resources of the drugstore have been strained to supply his needs. It will be noticed that one of the eight ingredients of this prescription—Basham's Mixture—is a preparation that is in itself a mixture of six ingredients. Furthermore, if one wanted to be hypercritical, it might be said that one of the ingredients of Basham's Mixture—aromatic elixir—is made up of five component parts and one of these parts, in its turn, has five elements in it. Leaving out of account the chemical reactions possible between the various twenty-one parts of this complicated compound, and omitting all ingredients that cannot be said to have some therapeutic action, this is what the patient gets:

Cascara evacuant	Potassium citrate
Strychnin sulphate	Iron acetate
Sodium bicarbonate	Dilute acetic acid
Codein sulphate	Ammonium carbonate
Caffein citrate	Aromatic oils
Sodium salicylate	Alcohol

This is an actual prescription recently written by a physician in a prominent eastern city in this enlightened nation of ours. It seems strange that in the light of our present knowledge a physician would be guilty of writing such a prescription. We wonder who could figure out what the action of this mixture would be.

Correspondence

The Proprietary Evil and "Gullible Doctors"

To the Editor:—After reading your knocks and boosts of the issue of October 19, I think that the term "gullible doctors" might be applied to the profession in its relation to the proprietary evil. It seems as if there were a large percentage of the profession waiting for some salesman to come along and hand him green or pink pills, telling him that they are good for almost everything, from nephritis to the vomiting of pregnancy, and explaining how much more cheaply than the other fellow he can sell to you. It was only the other day when one of these men walked into my office, pulled out a concoction of some kind and started to tell me that it was good for nephritis. I asked him what nephritis was and he said, "Doctor, I didn't come here to be quizzed; I am here to sell you goods." I asked him how he knew so much about it. He said in so many words, "You see, we are called into the house for which we sell and are coached along those lines, while in reality we don't know what we are talking about."

It seems as if the average physician could not say "no" to these semipatent medicine agents, and this accounts for the number of thrifty proprietary houses which are supported by the "gullible doctor."

If the average man will just "mix a few brains" with his prescription work and not depend on the inert proprietary drug, but insist on his prescription being filled with drugs from a reputable house, I feel sure that more of us would have much faith and better results in our drug therapy.

JAMES E. REEDER, M.D., Dyersville, Iowa.

Importance of Keeping Medical Society Records

To the Editor:—Having completed the history of the Summit County Medical Society, one evident fact is impressed on my mind: The records of local and state organizations are not properly kept. I do not refer to "minutes" or to any one society, for my researches brought me into contact with county, district, state and national history. Everywhere are gaps, lack of records of origin, and absence of many important items which should be obtainable if records had been properly kept.

I therefore beg to suggest that every medical society dig up its past, put its history into proper shape and provide for its proper recording in the future; also that every member sign the constitution of his society and give his birthplace, date, college, etc. The birthplace should be the country with the proper geographic name; not "America," but "United States," etc.

If any reader imagines these remarks to be unnecessary, let him endeavor to write the history of his society and learn the truth by experience with past defects.

A. S. MCCORMICK, Akron, Ohio.

[COMMENT.—Dr. McCormick calls attention to an important matter: the records of a county society are worthy of greater care than they ordinarily receive. The minutes should be recorded in such a manner as to make them permanent and should be transmitted from one secretary to his successor. Minute-books should be preserved. Their value increases with years. This is appreciated by some of the component societies, but few officers realize that official correspondence is the property of the organization and should be properly filed in the archives of the society. Often when such correspondence is kept at all, it is placed with the individual's business or personal correspondence and does not pass to his successor in office or into the organization's possession. This is a grave error, as this correspondence is of inestimable value as a record of the society's activity—of its history. When the members and officers have failed to preserve records of passing events, it is practically impossible to write a history of the organization for, lacking corroboration, what should be history becomes merely legend. Every society should provide suitable files for preserving its records, and require that they be safeguarded and preserved.—ED.]

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

EARLY RECOGNITION OF THE RELATIONSHIP BETWEEN THE MOSQUITO AND DISEASE

To the Editor:—While the subject of early observations on the causes of disease is rife, I wish to call attention to the fact that a Spanish physician of Havana, Cuba, noted that patients in his wards who slept under mosquito-nets did not acquire yellow fever.

This observation was made in the last half of the seventeenth century. The article citing the observation appeared in the *Edinburgh Review* or the *London Quarterly Review*, in some issue of the year 1850. I have lost the article, so cannot give exact dates, but there must be copies in existence. If this be accepted as a direct observation, it is probably the first incrimination of the mosquito and antedates Stanley and Stevenson by a century.

F. J. MCKINLEY, M.D., Pala, Cal.

ANSWER.—A careful examination of the *Edinburgh Review* and the *London Quarterly Review*, in the Library of Congress, failed to reveal any such reference as that to which our correspondent refers.

The first reference to mosquitoes as vectors of yellow fever is, according to Sir Robert Boyce ("Mosquito or Man?" 1909), that of Louis Daniel Beauperthuy, in the *Gazette officielle de Cumana* (1854, No. 57), in which he describes the "*Zancudo bobo*, à pattes rayées de blanc," as the agent of transmission. In 1848, however, the South Carolina physician Josiah Clark Nott, then practicing at Mobile, Ala., already regarded the mosquito hypothesis as proved for yellow fever, so far as his own observations were concerned *(New Orleans Med. and Surg. Jour.*, 1848, iv, 563, 601). Nott was (in 1844) the first to describe and operate for the condition which Sir James Y. Simpson afterward (in 1861) made known as coccygodynia, and was the author of some interesting ethnologic treatises, particularly on the Jewish race.

To those of our readers who have never seen it, the following extract from the Sanskrit Suśruta, bearing on the causal relation of mosquitoes to malarial fever, may perhaps be of interest. It was written at least fourteen centuries ago, and was translated at the instance of Sir Henry Blake, Governor of Ceylon, in 1905, the translation having been verified and certified by five Sanskrit scholars of acknowledged authority, among them a high priest, a Brahmin, and the Tamil and Cingalese translators to the government. As it reads, the translation gives a neat thumb-nail sketch of some characteristic malarial symptoms, while at the same time affirming the mosquito theory. After listing twelve different kinds of "life-destroying terrific" mosquitoes, with equally terrifying Hindu names, the Susruta proceeds:

> Their bite is as painful as that of serpents and causes diseases resulting from the three humors joined together; the bite, as if burnt with caustic or fire, is red, yellow, white and pink color, accompanied by fever, pain of limbs, hair standing on end, pain, vomiting, diarrhea, thirst, heat, giddiness, yawning, shivering, hiccup, burning sensation, intense cold, vesicles or pustules increasing, swelling, knots under the skin, circles, etc.

As a clinical notation of "chills and fever," this little extract approaches some of the early Greek records of disease in fidelity to fact, and the statement of the mosquito hypothesis given is therefore much more definite and scientific than the haphazard collocation of swamps, mosquitoes and malaria which we find in so many pieces of secular literature, Baring Gould's "Mehalah," for instance.

WILL THE TYPHOID BACILLUS LIVE IN SEA-WATER?

To the Editor:—It is said that the typhoid germ will not live or propagate in sea-water. Is that true? The oyster is the occasion for the inquiry. J. F. H.

ANSWER.—The statement that the typhoid germ will not live or propagate in sea-water cannot be true, because experiments are reported in which "oysters were inoculated with the typhoid bacillus and kept alive in tanks of sea-water and typhoid bacilli were obtained from their interior four, nine, sixteen and even eighteen days from the commencement of the experiment, the oysters showing no abnormal condition, while the typhoid bacilli recovered from them and from the tank water retained unimpaired all the characters of a typical typhoid bacillus." This statement is taken from Hewlett's "Manual of Bacteriology," page 268. It is true, however, that oysters are more frequently infected with typhoid bacilli in shallow, fresh water to which sewage has access than in their original beds in the sea-water.

PROTONE

To the Editor:—Please inform me about the authenticity of a certain medicament for thin persons, called Protone, which has been recommended to me by a certain druggist of this city. I want to know if this is a fake cure similar to many I have seen exposed in your paper, or if I can rely on its properties. They claim that Protone changes thin persons to robust ones in a few months.

J. B. NOGUERAS, Chicago.

ANSWER.—Protone is a fraud and was exposed as such in THE JOURNAL, September 21, 1912, p. 958.

THE BLUE SPOT IN THE SACRAL REGION

To the Editor:—Where may I obtain a copy of the *Archives de médecine des enfants*, Paris, June, xv, No. 6? It was listed in the Current Literature Department of THE JOURNAL, July 27, 1912, p. 312. I do not read French, but can easily have the article translated.

The Navajo Indian babe is invariably marked by the "blue spot" over the sacrum. These Indians are supposed to have migrated from Asia and have been traced by language roots as far as Alaska. So far no Tartar tribe has been found using the same dialect. This blue mark may help us to solve the problem.

A. M. WIGGLESWORTH, Fort Defiance, Ariz.

ANSWER.—The *Archives de médecine des enfants* is a monthly published by Masson et Cie, 120 Boulevard Saint-Germain, Paris, France, for 16 francs a year.

The article in question, "The Blue Spot in the Sacral Region" (*La tache bleue sacrée dite mongolique*), is by Dr. Bruch of Tunis, Africa, who states that the blue spot is quite common among the children there, but only in brunette children. He quotes a number of authors who have noticed the blue spot in Europeans in proportions of 1 in 600 or 1 in 300. He cites further K. Enjisawa's assertion (1906) that the blue spot is not peculiar to the Mongolian races. Monkeys have it almost constantly, and it persists in them throughout life. Comby mentions that the blue spot is found in certain families with mixed Indian blood, who live near the equator, and is regarded as a sign of this admixture. Bruch suggests that the blue spot might be found in negro babies if examined soon enough after birth, before their skin grows too dark for it to be perceptible.

HYDROCHLORIC ACID DEFICIT

To the Editor:—Please tell me in detail how to estimate the "hydrochloric acid deficit" in a specimen of stomach contents. Both Emerson's "Clinical Diagnosis" and Sahli's "Diagnostic Methods" (American Edition) are vague on the subject. Therefore kindly give me a concrete example with the mathematics of the procedure explained. Please omit name and address. D. B. N.

ANSWER.—"Hydrochloric acid deficit" is a term used to indicate the amount of hydrochloric acid necessary to saturate a specimen of stomach contents which is deficient in hydrochloric acid so that it will give a reaction for free hydrochloric acid. To determine this, 10 c.c. of the stomach contents are placed in a beaker and a solution of tenth-normal hydrochloric acid is added drop by drop until a reaction for free hydrochloric acid is obtained. The point at which free hydrochloric acid appears may be determined by testing with congo paper, which turns blue at the point at which the protein is saturated and some of the hydrochloric acid remains free. Thus, if in the estimation 2.5 c.c. of tenth-normal hydrochloric acid must be added before a piece of congo paper (or better a solution of congo-red) is turned blue by the mixture, the hydrochloric acid deficit would be stated at 25.

LITERATURE ON HEAT CRAMP

To the Editor:—In THE JOURNAL (June 1, 1912, p. 1706) appeared a request for literature on this subject. Heat cramp is a pathologic condition which has been either overlooked or disregarded by earlier writers on the subject of heat affections. Recent evidence suggests that the condition is not uncommon and that at times it may be caused by exposure to solar influences. Shortly after entering the Navy I witnessed about fifty cases of this interesting condition on a forced-draft run to Honolulu. To my surprise, there was nothing on the subject discoverable in the literature then available; more diligent search since that time has given better results.

Heat cramp seems to be the symptom of a morbid condition of distinct pathologic entity, which I have described under the name of "myalgia thermica" (*U. S. Naval Med. Bull.*, vi, 380), and have attempted to differentiate it etiologically and clinically from prostratio thermica and febris thermica. From a study of meteorologic conditions and a tabulation of data, it seems that prostratio thermica is essentially a "syncope" taking place among those exposed to high temperature who suffer with any impairment of proper heat dissipation, either internal or external, such as ill health, foul air, humidity, lack of drafts, etc.

Myalgia thermica appears to be caused by excessive heat with concomitant conditions that favor rapid heat dissipation by the production and evaporation of large quantities of perspiration, thereby causing deficient serosity of blood. Judging from my own experience on about 100 cases and from a review of the literature, it tends to occur among those working in places of high temperature with low relative humidity (sometimes as low as 7 and 8 per cent.), and especially when strong drafts of this hot dry air are present. In this disorder the relative increase of thermogenesis and thermolysis is about the same, thus causing thermotaxis to remain near the normal.

The cramps observed were apparently divisible into "local" or myogenic and "general" or neurogenic. They were often spontaneous, but could at times be produced by pressure and other means. The attacks of the "general" type were usually precipitated by some sensory stimulus, as cold baths or exposure to outside air. The majority of these originated outside the fire-room and after the completion of the four-hour watch. Complications and sequelæ of

this condition are varied and curious. Following one of these forced-draft runs, six cases of appendicitis *(U. S. Naval Med. Bull.* v, 190) among those working in the fire-room took place within the brief period of about thirty-six hours; the diagnosis of five of these was afterward confirmed by operation.

The presence of an undetermined pathogenic factor in the production of thermic myospasm has been noted by others (Meyer, Kennedy, Grunwell). The striking tendency to "grouped cases" leads me to suggest the possibility of some micro-organism as one of the pathogenic agents.

After a cursory review of the English literature, I have managed to find the following articles, and will be glad to know of any that have been overlooked. In addition, there are a few by foreign writers, but these have not yet been obtainable.

Meyer, Randolph M.: *Virginia Medical Semi-Month.*, 1897-98, p. 552.
Coplin and Bevan: *Med. News*, Philadelphia, 1892, lxi, 262 (?).
Welsh, H. W.: THE JOURNAL A. M. A., April 10, 1909, p. 1179.
Gatewood, J. D.: Naval Hygiene.
Anders, J. M.: Practice of Medicine, p. 1290.
Rennie, W. H.: *Southern Med. Jour.*, February, 1911.
Cameron, W. H.: THE JOURNAL A. M. A., May 8, 1909, p. 1483.
Clendening, L.: *Ibid.*, May 7, 1910, p. 1517.
Comment: *Ibid.*, June 1, 1912, p. 1706.
Edsall, D. L.: *Ibid.*, Dec. 5, 1908, p. 1969; also *Am. Jour. Med. Sc.*, December, 1904.
Elliott, M. S.: *Jour. Mil. Surg.*, xxii, 227.
Edsall, D. L.: Tr. Assn. Am. Phys., xxiv, 625; also *Wis. Med. Jour.*, 1910, p. 425.
Grunwell, A. G.: *U. S. Naval Med. Bull.*, iii, 223.
Suggestion: *Ibid.*, iii, 44.
Kennedy, J. T.: *Ibid.*, iv, 187.
Diel, O.: *Ibid.*, iv, 189.
Johnson, M. K., and Mann, W. L.: *Ibid.*, v, 190.
Higgins, M. E.: *Ibid.*, iv, 207.
Abeken, F. G.: *Ibid.*, v, 57.
May, H. A.: *Ibid.*, v, 53.
Mann, W. L.: *Ibid.*, vi, 380; Oct. (?), 1912.

Some points in the following literature may be indirectly applicable to the subject of heat cramp.

Fleming, W. J.: *Jour. Anat. and Phys.*, July, 1879, xxiv.
Wood, H. C.: Sunstroke, 1872; also *Boston Med. and Surg. Jour.*, cxi, 505.
MacLeod, Kenneth: *British Med. and Surg. Jour.*, September, 1899.
Sandborn: *Ibid.*, 1898, i, 744.
Stannius: *Arch. f. Phys. Heilk.*, 1852.

WILLIAM L. MANN, PH.B., A.M., M.D.,
Passed Assistant Surgeon, U. S. Navy.

ARTICLES WANTED ON TREATMENT OF FRACTURES OF THE LONG BONES

To the Editor:—The American Surgical Association has appointed a committee to report on the operative and non-operative treatment of closed and open fractures of the long bones and the value of radiography in the study of these injuries. Surgeons who have published papers relating to this subject within the last ten years will confer a favor by sending me two reprints. If no reprints are available, the titles and places of their publication are desired.

JOHN B. ROBERTS,
Chairman of Committee, 313 South Seventeenth Street, Philadelphia.

Society Proceedings

COMING MEETINGS

American Physiological Society, Cleveland, Dec. 26-28.
Clinical Cong. of Surgeons of North America, New York, Nov. 11-16.
Southern Medical Association, Jacksonville, Fla., Nov. 12-14.
Southern Surg. and Gynec. Assn., Old Point Comfort, Va., Dec. 17-19.
Western Surgical and Gynec. Assn., Cincinnati, Dec. 20-21.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION

Thirty-Eighth Annual Meeting, held at Chicago, Oct. 22-24, 1912

The President, DR. LOUIS FRANK, Louisville, in the Chair

The officers elected were named in THE JOURNAL November 2, page 1636.

Pernicious Anemia

DR. J. H. STEALY, Freeport, Ill.: Prognosis and treatment depend wholly on the physician's ability to determine the etiology. The acid treatment in proper dosage is the best adjunct in cases of known etiology, and the best single system in those cases in which the cause cannot be established. Dietetic measures are essential. Food should be selected with care and careful attention paid to the frequency of feeding.

Arteriosclerosis

DR. G. W. MCCASKEY, Fort Wayne, Ind.: The most important factor in the production of this disease is overstraining. The various intoxications derived either from within or without play an important rôle. Fibrosis and spasm are the two changes found in the arterial wall. The former is impossible of removal; the latter more or less completely amenable to treatment. The proper object of treatment, therefore, is not the impossible task of removing fibrous tissue, but the overcoming of vascular spasm, the conservation of the failing myocardium in the later stages and so far as possible the overcoming of auto-intoxication by rational measures. The best means for accomplishing these results must depend on the individual case, especially the character of the dominant arterial change, whether fibrous or spastic, the stage in which the case came under observation, the degree of involvement of the heart, associated auto-intoxications, habits of life, etc. If blood-pressure is high, degenerative changes advanced and the general aspects of the case threatening, rest in bed is the most important initial measure of treatment. The diet should be as near the minimum requirements of the body as possible. This is less important with regard to the starches and fats than the proteins. Vasodilators, iodids, and in advanced cases with failing hearts, digitalis, and in certain cases, a special bath devised by me are the general measures of treatment. A special measure of treatment in a group of cases in which the habit of cardiac hyperactivity is in excess of circulatory requirements and tends to keep up high blood-pressure, is aconite in increasing hourly doses to the limit of tolerance or accomplishment of therapeutic results.

Therapeutic Value of Tuberculin

DR. FRANCIS M. POTTENGER, Monrovia, Cal.: Tuberculin will stimulate the machinery of immunization and increase the amount of protective antibodies in the blood. Tuberculin by its focal stimulation favors healing of the focus and as a result of this we expect a more rapid healing of the disease.

Management of Pregnancy and Labor in Pelvic Contraction

DR. HENRY SCHWARZ, St. Louis: In cases of moderate pelvic contraction in primiparous women in which the head has failed to enter the pelvis a week before term, the patients should enter a hospital and be given the test of labor. If this test fails, they should be delivered by pubiotomy. In cases of moderate pelvic contraction in multiparous women, with a record of craniotomy, high forceps or pubiotomy, the patients should enter the hospital six weeks before term and be delivered by artificial premature labor. Patients with highly contracted pelves should enter the hospital near term and be delivered by cesarean section.

Indications For and Against Sterilization

DR. J. H. CARSTENS, Detroit: We are not justified in sterilizing a woman in cases of cesarean section for bony deformities when the pelvic organs are normal and there is ordinary health, or in cases of cesarean section for eclampsia or placenta praevia. In cases of tumors of various kinds the tumors should be removed at the time of operation, if possible, and the woman not sterilized. In case of multiple fibroid tumors, hysterectomy is indicated when the tumors cannot be enucleated. In rare cases in which constitutional conditions exist, such as tuberculosis, etc., sterilization may be not only justifiable but actually indicated.

Cesarean Section

DR. ASA B. DAVIS, New York: I have performed 149 consecutive cesarean sections in twelve years, with the loss of seventeen mothers, a total maternity mortality of 11.4 per cent.; 152 children were delivered, twins three times; twenty-five children were still-born or failed to live, a fetal mortality of 23 per cent. I have done seventy-one consecutive cesarean sections in the past two years, with a loss of four mothers, a maternal mortality of 5.6 per cent. There were seventy-two children delivered; eight died or were stillborn, a fetal mortality of 11 per cent. I report fourteen cases of eclampsia so delivered; ten patients lived, 71.5 per cent.; four died, a mortality of 28.5 per cent. Sixteen children were delivered; eleven, or 68.8 per cent., lived. Five children died or were stillborn, a mortality of 31.2 per cent. Twelve mothers were primiparas, one was a secundipara, and one a tertipara; none was in labor. Sterilization of the patient is not practiced. Repeated cesarean section has been

performed in twenty-seven cases; in eighteen the second time, in seven the third time, in one the fourth time and in one the fifth time. The best time to operate is at once after labor starts, thus insuring a mature child. If one is sure of the duration of pregnancy, the operation may be done at one's convenience at any time near term. It is not necessary to wait for dilatation of the cervix. I prepare the patient as for any laparotomy. The operation is done by a short median incision wholly above the umbilicus, in the mid-line. The uterus is opened in front, mid-line, from just below the fundus downward. It is closed by an interrupted layer of chromic sutures down to the mucosa, and this layer is buried by a continuous suture, so that no raw surfaces are left on which adhesions can form. The uterus drops into the lower abdomen as after normal delivery. I have not seen hernia in any of my high operative cases.

DISCUSSION

DR. E. GUSTAV ZINKE, Cincinnati: We have been taught that the management of narrow pelvis is now a simple proposition. It consists of the test of labor, hebosteotomy and cesarean section. All the so-called compromise operations are discarded. The new therapy consists in the test of labor, and in 80 per cent. of the cases this test answers the purpose. In 15 per cent. symphyseotomy or hebosteotomy is necessary, and in only 5 per cent. cesarean section. Every pregnant woman should select a hospital for the place of her delivery. It is the safest place for her, and it is the easiest place for the obstetrician. Cesarean section as a curative agent for puerperal eclampsia cannot be accepted. It has always been a riddle to me why cesarean section should be accepted for the relief of puerperal eclampsia when the same physicians deny cesarean section a place in the treatment of placenta praevia.

DR. CHARLES S. BACON, Chicago: There can be no question about the induction of premature labor in suitable cases. This necessitates our being able to determine the degree of development of the child, and that can be done in practically all cases by a careful study. It also necessitates our being able to give the premature child proper care; this should also be possible with every one who is able to do cesarean section. In certain properly selected cases, it is the operation to be included in the treatment of contracted pelvis. In cases of contracted pelvis, I cannot see why there should be any objection to the operation of sterilization, if it is asked for by the woman herself, as she and not the physician runs the risk. In regard to section in cases of eclampsia, abdominal section is attended with more shock to the woman than vaginal section. In a few cases in which evacuation of the uterus seems necessary and in which the uterus cannot be dilated, vaginal section seems to have a place.

DR. CHARLES E. PADDOCK, Chicago: We should leave the matter of sterilization to the patient I would present to her the facts of what is likely to happen in case she becomes pregnant again, and if she so elects, very well; but she must know the dangers of a second pregnancy.

DR. CHARLES B. BROWN, Sycamore, Ill.: Cesarean section has a legitimate and proper place in obstetrics. If there were more first-class obstetricians in the country and fewer wonderful abdominal surgeons we would hear less about cesarean section. My statistics as a general practitioner, which include no cesarean sections for normal labor, for puerperal eclampsia, or for placenta praevia, are better than any of those that have been presented.

DR. C. EDWARD SAYRE, Chicago: I agree with Dr. Paddock, that after the risk of a subsequent pregnancy has been explained to the patient, if she wishes to be sterilized, the operation should be done. As regards the high and low incision in cesarean section, I advise the high incision.

DR. RACHELLE S. YARROS, Chicago: With reference to the induction of premature labor, it seems to me that the induction of premature labor will in a few years, when we have perfected cesarean section, be a thing of the past, for two reasons: 1. The bringing of a premature child into the world is not so difficult a thing as to keep the child alive. 2. The mother is subjected to considerable manipulation, even by the introduction of a bag, and cesarean section, after all, with the great reduction in the mortality, will be more frequently performed in the future than it has been in the past.

(To be continued)

DELAWARE STATE MEDICAL SOCIETY

One Hundred and Twenty-Third Annual Meeting, held at Wilmington, Oct. 7-8, 1912

In the absence of the president, DR. L. H. BALL acted as temporary chairman.

The officers for the coming year are: president, Dr. L. A. H. Bishop, Dover; vice-presidents, Drs. Albert Robin, Wilmington, and Joseph M. Martin, Lewes; secretary, Dr. G. W. K. Forrest, Wilmington; treasurer, Dr. S. C. Rumford, Wilmington.

Rheumatoid Arthritis

DR. J. J. JONES, Wilmington: I have a patient who has been suffering from osteo-arthritis since September, 1866, and who has had recurrent exacerbations nearly every year—a good many in some years. He has been confined to bed on account of these attacks for more than six years altogether. I started to treat him in 1901. At that time both hands were much disfigured and the joints were ankylosed. He now has the use of all his joints and is able to attend to his duty as president of a bank nearly every week through the year. He can bring on an attack in twenty-four hours by taking certain food containing a good deal of sugar. Sweets and acids especially have a tendency to bring on an attack.

The second patient is a little girl. In the first week of April, 1911, she was taken down with measles from which she soon recovered. On May 4, 1911, she was taken with what was supposed to be rheumatism. It started in her hands and wrists; then it went from one joint to another until the wrists, elbows, ankles, hips, shoulders, the joints of the fingers and most of the spinal column were affected. She became a complete invalid. Nearly every joint was fixed. In December I had her etherized and the adhesions broken up in all the joints. I was unable to straighten many of the joints the first time. I etherized her three times, broke up the adhesions and stretched the tendons and muscles; finally we succeeded in restoring her to pretty good condition and she left the hospital April 24, 1912. Now she is able to bend her head back and has not an ankylosed joint.

The most important part of the treatment is the recognition of the case in the early stages, before it starts, as it were, in the synovial membrane. After ankylosis has taken place, we have a good deal to contend with. One must be careful not to use too much force in breaking up the adhesions. In every one of these cases there is achylia. Digestion is very imperfect. There are putrefaction, decomposition and absorption of the protein matters. Treatment might as well not be started unless the gastro-intestinal tract is taken care of. The two elements in the local treatments which are most important are glycerin and iodin, which produce immediate effects.

DISCUSSION

DR. ALBERT ROBIN, Wilmington: "Rheumatism," like "malaria," is a term which has covered a multitude of diagnostic and therapeutic sins. There are all kinds of rheumatism and all kinds of arthritis of the joints. During the process of infection there may be the same hyperemia and edema and apparently all the other manifestations of inflamed joints. There is undoubtedly a joint infection, metabolic in character, which is due to errors in digestion or lack of elimination or changes in the blood-supply which produce deposits in the blood. There is another form of blood infection which is undoubtedly due to some defect in the secretion of the ductless glands—a defect in the secretion of thymus, some assert. Just how one treatment can apply to all I cannot conceive. I do not see how any one treatment, unless simply invigorating, can be in any way specific in all cases of arthritis or joint infection. Furthermore, I do not see how a joint already destroyed can be restored by any application, whether local or not. You might as well say that by treat-

ment you can restore an amputated leg. Eventually there is such a destruction of cartilage and bone and such an infiltration of the synovial membranes of the capsule that it cannot be restored by any kind of treatment.

DR. P. W. TOMLINSON, Wilmington: I agree with Dr. Robin in his view of these cases that no local treatment is going to cure a case that is the result of faulty elimination. I think that these local applications will in all probability afford some temporary relief to the patient, and, if a proper line of constitutional treatment is pursued, the patient will be made more comfortable during that time and will be encouraged. My experience in these cases has not been so extensive as that of Dr. Jones, but has been enough to convince me that I need to find some other treatment besides local application.

The Diagnostic Value of the Cystoscope

DR. H. A. CLEAVER, Wilmington: The work that has been done in differential diagnosis of gastric conditions in the last few years warrants us in the belief that there is nothing to prevent the same hopeful outlook on the part of those who have been the pioneers in the development of cystoscopy. The possibilities of the cystoscope are not limited to the bladder. You can examine the deep urethra and the verumontanum by using dilatation. The illumination is enough to examine such things as small papilloma, to examine and tell the difference between mulberry stone and the smooth dark stone we so often see. It is possible to detect tuberculosis of the kidney before it has shown itself elsewhere. Another subject of importance to surgeons because of the great advances in this field in recent years is hypertrophy of the prostate. Palpation by rectum does not reveal the extent of the enlargement of the middle lobe of the prostate. That can be demonstrated with the cystoscope. Another thing to be determined even when two kidneys are functionating is which kidney is secreting properly and which is not.

DISCUSSION

DR. H. J. STUBBS, Wilmington: In catheterizing the ureter, if it was twisted or bent or there was a misplaced kidney, how would you tell the difference between kinking and stone impaction?

DR. H. A. CLEAVER, Wilmington: When the question of prolapsed kidney comes up, palpation of the abdomen is one of the first things that would have to be done, to determine the exact state. In differentiating the blocking, whether due to kink or to impacted stone, the use of a blunt-tipped catheter would naturally be difficult. Dr. Laird of Philadelphia has invented an exceedingly ingenious blunt-tipped searcher; the catheter has a metal tip, from which a small wire runs back to a phonendoscope. The minute you strike the stone there is a sharp clink.

The Importance of Early Diagnosis and Prompt Action in Certain Conditions

DR GEORGE I. MCKELWAY, Dover: In the matter of cancer, physicians should instruct every woman patient that if she has an irregular bloody vaginal discharge, especially at about the time of the menopause, she should have her case carefully studied; she should be examined, and a diagnosis should be arrived at as early as possible. If cancer be present, the only treatment is the immediate and complete removal of the diseased structures. A lump in the breast of a woman at any age, if it appears to be cancer, requires immediate operation. In every case of persistent indigestion, it is necessary either to find or to exclude cancer of the stomach, gall-bladder or pancreas. Sometimes the patient's own home-made diagnosis of "bleeding piles" is accepted when the condition is really one of cancer of the rectum. Ectopic pregnancy should be diagnosed early and should always be suspected when one or two menstrual periods have been missed. The ideal time to operate is before rupture occurs. There are three cardinal symptoms of appendicitis: pain in the abdomen, muscular rigidity on the right side and tenderness to pressure with the tip of one finger over McBurney's point. When these are present the patient should at once be turned over to the surgeon.

DISCUSSION

DR. H. J. STUBBS, Wilmington: I think that more lives are lost from mistaken diagnosis in medicine than in surgery. The only time to operate for cancer successfully is in the very early stages of the disease.

DR. J. WARD STEELE, Dover: As an aid in making a diagnosis of some malignant diseases I should like to emphasize the importance of taking a leukocyte count. If the disease is malignant, the leukocyte count will vary from 16,000 to 20,000 or 30,000; sometimes it will be as high as 40,000.

DR. P. W. TOMLINSON, Wilmington: If it is not appendicitis, there is no great harm done. We naturally shrink from operation. One of my medical friends who generally recommends operation in appendicitis had the symptoms; he waited, kept the ice-bag applied, and called up a friend in a neighboring city to talk with him about this condition. The friend said, "Well you know what you advise in such cases." The doctor said, "Yes, but I find that there is a great difference between having a patient and being one." He persisted in his ice-bag treatment and fortunately has not had another attack. I think, however, that it is natural for us all to resist an operation as long as we can; so it is not always easy to induce your patient to consent to operation.

DR. H. A. CLEAVER, Wilmington: I know perfectly well that what Dr. McKelway says of prompt action is the keynote of the modern treatment of appendicitis. At the same time what are you going to do in those cases which every man knows have been treated so apparently well with ice-bags and antiseptics? What was that condition? Was the physician mistaken in diagnosis? We cannot be mistaken always. A great many patients have a horror of the operating-table. When you have a case that is not accompanied by profound disturbance, and the patient is not severely shocked; when there is merely rigidity of the right rectus, a slight area over the iliac region, and the patient is suffering not too intensely, the ice-bag gives relief. Should immediate operation be advised, or would you advise, as is done by some, that the patient be watched carefully? Are you going to wait during the interim between that and the possible next attack?

DR. ALBERT ROBIN, Wilmington: The protest against the ice-bag is becoming so universal that the ice-bag will be a memento of the past, in which it has been not only unnecessary but harmful.

DR. J. J. JONES, Wilmington: As for doing harm to the tissues, you should guard against the tissues becoming thickened, and must not keep the ice too close to the skin. We must put about three thicknesses of towel under the ice-bag, or perhaps more in some cases. It is not necessary to freeze the skin. It diminishes the pain in a very short time. After from six to twelve days' application of the ice I have operated and had the patient come out all right. In many cases I have found pus down in the pelvis, and in some cases a gangrenous condition of the appendix which came out all right.

DR. H. J. STUBBS, Wilmington: A certain percentage of appendicitis patients recover whether ice or hot water is used. We are interested in the patients that die. Why do they die? Because they have been temporized with. Every patient with appendicitis should be operated on the day before the attack—if the diagnosis could be made.

AMERICAN ASSOCIATION FOR STUDY AND PREVENTION OF INFANT MORTALITY

Third Annual Meeting, held in Cleveland, Oct. 2-5, 1912

(Concluded from page 1645)

Maternal Feeding

DR. J. P. SEDGWICK, Minneapolis: The number of mothers who nurse their infants can be increased. This may be accomplished by giving the mother every advantage of good nourishment and care during the whole of her pregnancy, with proper instruction as to her diet after the baby is born. The moth-

er's comfort should be considered: longer intervals and shorter nursings will often change nursing the baby from a burdensome duty to a real pleasure. Night feeding should be avoided. Contagious diseases are not sufficient ground for weaning, but open tuberculosis in the mother is a contra-indication to breast-feeding. Complete and regular evacuation of the breasts is necessary for the stimulation and continuation of the milk-flow. Weaning should be begun in the last quarter of the first year. Insufficient quantity, mother's condition, poor quality of milk, colic and mastitis are some reasons given for discontinuing breast-feeding. All classes, the ultrasocial, the educated of means, the middle, the poor, can be reached by the physician, who should impress on mothers the necessity of breast-feeding. Consultations and dispensaries, newspapers and clergymen are doing much to disseminate information concerning the importance of the mother's first duty to her baby.

Pasteurization and Sterilization (Boiling) of Milk

DR. HENRY F. HELMHOLZ, Chicago: By adequate pasteurization is meant the process by which milk is heated to a temperature of 140 F.+ in a period of at least twenty minutes and then rapidly cooled. By sterilization of milk the layman usually understands the boiling of milk, which, however, does not render the milk sterile unless repeated on three successive days. By actual sterilization is meant the process of rendering the milk absolutely free from bacterial life either by the interrupted method, mentioned above, or by heating with steam under pressure. There can be no doubt that adequate pasteurization has come to stay and is to be recommended under practically all circumstances. Milk is to be pasteurized in the final package before it is sent to the home. This applies to milk sent in bulk as well as that sent in modified form in tubes.

DISCUSSION

PROF. C. E. A. WINSLOW, New York: It has been said that pasteurization does not destroy toxins; that it does destroy enzymes; that it produces a milk of keeping quality, and that it causes scurvy and rickets. Dr. Helmholz has shown the fallacy of these statements. On one point he did not speak quite so fully, and that is whether we should prefer a clean raw milk of certified grade, or the pasteurization of a dirty milk containing chicken legs and all manner of filth. I, for one, refuse to accept this dilemma. There is absolutely no reason why you cannot keep milk clean and then pasteurize it. You can have farm and dairy inspection and bacterial count, and in each case you can enforce just as high a standard as the public can pay for—and then pasteurize. You cannot enforce a certified milk standard with tuberculin testing because 15- and 20-cent milk is of no value in solving the general milk problem. But you can enforce just as high standards as are enforced for any raw milk of good grade to-day. Even for the best certified milk I believe pasteurization in the home should be an invariable rule. In an epidemic of septic sore-throat in the neighborhood of Boston, in the study of which I spent the greater part of the summer of 1911, there were 1,000 cases and fifty deaths caused by a clean milk, not of certified grade but very nearly so, a milk running usually under 100,000 bacteria, supervised by one of the best milk experts in the country. You cannot help these things. Care may minimize the danger but no amount of care can insure against infection of the cleanest milk from an unrecognized carrier case.

Elimination of the Midwife

DR. CHARLES EDWARD ZIEGLER, Pittsburgh: The outlook for the solution of the midwife problem in this country is hopeful, but there is danger in too great haste. The real danger lies in the possibility of attempting to educate the midwife and thereby giving her a permanent place in the practice of an important branch of medicine. Obstetrics is an important branch of medicine, and yet it is the most poorly done, not only because 50 per cent. of the work is done by midwives, but also because of the low standards of midwifery among physicians and laity alike. We can do very well without midwives, but physicians are indispensable. The sensible thing to do is to eliminate midwives and educate physicians until they are capable of doing good obstetrics, and then make it financially possible for them to do it. Physicians cannot be properly trained in obstetrics, however, until they can have the work midwives are doing, since 75 per cent. of the clinical material otherwise available for teaching purposes now provides a livelihood for midwives. Our present system of giving medical service to the dependent poor is wrong. The burden of providing medical service for them should not be placed on physicians without compensation, but should be assumed by the state. Hospitals and dispensaries caring for the dependent poor should be supported by the state, and the physicians in charge and doing the work should be paid adequate salaries and their incomes limited. They should not be allowed to use the control which they have over free patients to gain for them a monopoly over private patients also. Private patients should not be cared for in hospitals provided by public moneys, without a just compensation to the people for the privilege. Physicians holding professorial appointments in medical schools should have liberal salaries, their incomes should be limited, and they should devote their entire time to hospital work, research and teaching. In medical centers patients cared for by the state should be placed in teaching hospitals affiliated with medical schools. They thus supply the adequate clinical material and at the same time receive the best possible care. In the larger cities maternity hospitals are rapidly supplanting midwives, and may be extended to care for all patients unable to pay for the services of physicians and nurses. In smaller towns and rural districts midwives are less common, and the work they now do should be done by physicians and nurses, subsidized by the state.

DISCUSSION

DR. N. T. MILLER, Cleveland: The chief argument employed by the defendants of this midwife system which we have imported together with a foreign-born population is that the people themselves prefer midwives, and do not want physicians. To ascertain the truth of this, Dr. Gerstenberger instituted an inquiry among the people handled through the Babies' Dispensary. The nurses asked the question, "Do you prefer a doctor or a midwife?" Almost universally the answer was "A midwife." He then changed the form of question, asking them whether they knew that they could obtain the services of a physician and a nurse by paying not more than they would be obliged to pay the midwife. A large percentage at once declared that they preferred the doctor and nurse, but imagined the expense prohibitive.

Through its lying-in clinics Cleveland is endeavoring to give to its poor foreign-born population, as well as to the poor of every class, a substitute for the midwife which will fulfil the minimal requirement. These clinics or substitute agencies have been organized solely for the purpose of educating the public, improving the social and physical conditions of the women which they handle, and to give instruction to men and women in the proper handling of the pregnant women. Their figures justify the assertion that as far as Cleveland is concerned women can be taken care of with far better results than those which the midwives obtain.

DR. S. JOSEPHINE BAKER and DR. PHILIP VAN INGEN, New York, made a strong appeal for the education of the midwife, and held that she was an essential factor in the obstetric service of any large city with a large foreign population.

DR. A. J. SKEEL, Cleveland, took exception to this view holding that it is criminal in this advanced age to countenance, for poor women, any attention or care that is not based on modern scientific knowledge.

DR. ALICE WELD TALLANT, Philadelphia, while recognizing that midwives may be a necessary institution under present conditions, thought that the solution of the problem lay in altering those conditions. She felt that this could best be done through more maternity hospitals, and by enlarging the out-practice service of our hospitals.

Better Parents of Better Children

DR. HELEN C. PUTNAM, Providence, R. I.: We face the fact that parenthood does not make wise parents. It is the greatest vocation in the world, and the only great vocation entered on without definite training, without definite requirements of fit-

ness by the state. The quality of their home-makers determines the existence of nations. The feeble-minded, insane, habitually criminal, confirmed alcoholic, sexually depraved man or woman cannot make good homes for children. They must be segregated in communities, the sexes separate, as is done in a few places. These villages become almost self-supporting, the people enjoy the comforts and many of the pleasures of life, but cannot blight normal homes by their influence and children. If the billions now spent on such unfortunates could be used for well-born children instead, we could double our educational opportunities; and if these degenerates continue to multiply as during the last half century, the burden of their care must cripple us even more seriously. The other line of effort in making better parents is education of all normal persons for intelligent home-making. Such education is a process as definite as training for nursing or civil engineering.

The Importance of Hospitals for Infants and Their Part in the Prevention of Infant Mortality

DR. L. EMMETT HOLT, New York: We have in this country been slow to appreciate the need of special hospitals for children. Homes for foundlings, which most of our large cities have provided, have been in no sense hospitals, are often lacking in proper medical control and by their excessive mortality have served as an example of how little philanthropy without science can accomplish in saving infant life. Boards of managers, superintendents of general hospitals and even head nurses can rarely be made to appreciate the peculiar hospital requirements for infants. Separate hospitals are greatly to be preferred to wards for infants in large general institutions. The construction, equipment, organization and operation of a hospital for young children are quite different from those needed in hospitals for adults. These grow out of two great difficulties which attend the hospital care of these patients, the problem of nutrition and that of ward infections.

The special hospital is first of all the research department of organizations for the reduction of infant mortality. Observations must be made from which the fullest and most exact knowledge regarding the causes of infant deaths is to be obtained. It is to the modern hospitals with their well-equipped laboratories, their trained staff of workers, their wards furnishing opportunities for the most careful study of individual children that we must look, not only for progress in the diagnosis and treatment of disease in infants, but also for more exact knowledge in the problems of infant hygiene and nutrition on which prevention of infant deaths is based. It is only in hospital wards that new ideas in infant-feeding, or in the diagnosis or treatment of disease, can be put to the practical test to see how much of value they may possess. This can be done only to a limited extent in private practice and in out-patient work. The infants must be where all the conditions of life can be controlled and all symptoms watched with the closest attention; this is possible only in a hospital.

The educational value to the public of an up-to-date special hospital can hardly be overestimated. It does much for the community besides caring for the sick poor. It sets a standard of medical practice for the profession of the city. It is an exponent of modern science in its particular field. Here the best hygiene should be illustrated, the most intelligent feeding practiced and the best care of the infant, sick or well, exemplified. From those immediately connected with the hospital as physicians, nurses and managers, these ideas gradually spread to the general public and the institution takes its place in the community among the great forces for social uplift in the department of child welfare.

One of the weakest points in our present system of visiting district nursing is our failure to provide for the suitable training of the women who are doing this work. Something can, of course, be done by special courses of lectures such as are given in some cities to their corps of visiting nurses; but this instruction is of necessity very superficial. We must go much further than to give a few general lectures on infant hygiene and emergencies and to teach how to make up four or five standard milk formulas. The visiting nurse must work much of the time without close supervision and must act on her own initiative; unless she has been specially trained, her work, though carried on with a praiseworthy devotion, may be very inferior.

Since the largest part of the work for the reduction of infant mortality lies in the direction of the prevention rather than the cure of disease, it follows that only a small part of it can actually be done in hospital wards. But the lines of work undertaken must be largely based on hospital experience. By it rules can be formulated and policies determined according to which the general outside campaign is to be conducted to accomplish the results aimed at. If infant hospitals are to do their part they must have proper buildings, well-equipped laboratories for chemical and pathologic studies, a corps of attending specialists, and an adequate nursing staff. Organized on this high plane their field of usefulness is a very large one, not only in advancing this special department of medicine, but in furnishing the groundwork on which a proper knowledge of the child, sick or well, must stand.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES

Twenty-First Annual Meeting, held in Baltimore, Oct. 1-5, 1912

(Concluded from page 1565)

Representatives of Foreign Nations

The following accredited delegates from foreign countries were present at the meeting:

Canadian Army Medical Corps: Lieut.-Col. George S. Rennie, Major E. J. Williams, Capt. James H. McGarry.
Chinese Army: Col. H. C. Chang. Chinese Navy: Major S. H. Chang, Capt. M. Y. Tong, Capt. S. F. Hsii.
Royal Navy, Denmark: Surgeon-General A. Bornemann.
French Army: M. le Médecin Inspecteur Général Charles Fevrier, M. le Médecin en Chef de Deuxième Classe Barthelemy, M. le Médecin Principal de Deuxième Classe Rouget.
Royal Army Medical Corps, Great Britain: Lieut.-Col. S. Hickson, M.B.
Guatemala: Col. R. Bengoechea.
Italian Royal Navy: Col. Surgeon Chevalier Francisco Testi, Major Carlo Maurizio Belli, Surgeon Mariggio Serrati.
Mexico: Colonel Eduardo R. Garcia.
Imperial Russian Navy: Surgeon-General A. A. Zohrt, Baltic Squadron.
Australia: Col. Ramsey Smith, P.M.O., Fourth Military District.

Public Meeting

At the public session formal addresses of welcome were delivered by Hon. Philipp Lee Goldsborough, governor of Maryland, on behalf of the state; by Edwin L. Quarles, director of the Greater Baltimore Committee, on behalf of volunteer organizations; and by Dr. Hugh H. Young, president of the Medical and Chirurgical Faculty of Maryland, on behalf of the medical profession of Baltimore. Dr. Young, in his address, spoke of the important part Baltimore had played in the development of modern military medical science, and mentioned by name many of the eminent medical scientists who had received their education in the medical schools of Baltimore. He strongly advocated the passage of a state-wide law compelling the use of antityphoid inoculation.

After the president's address, which has already been mentioned, the foreign delegates were introduced and presented with the insignia of the association. Several of the delegates responded either in English or in their own languages.

The Mentally Unfit

ASSISTANT SURGEON R. F. SHEEHAN, JR., U. S. Navy, discussed the exclusion of the mentally unfit from the military service, and said that from a personal investigation of the statistical tables presented in the annual reports of the surgeon-generals of the Army and Navy, it is apparent that as a cause of disability in the service, insanity is far from a negligible factor, and that, as it represents the total loss of the individual, and in most cases a large and prolonged expense to the government for his maintenance, it would seem to be important to take more decisive measures to safeguard the military forces from the entrance into them of those mentally unfitted, and even of the potentially insane. It is a common experience in the service to find men who, although physically desirable, are mentally unfit, "dummies" or imbeciles, and who through their inefficiency and misdoings are a source of annoyance, expense and even danger. Care should be taken

to eliminate the recruit with a history of nervous or mental disease, epilepsy, chronic headache, ungovernable temper, alcoholism, drug addiction or slow progress at school, or with a history of frequent changes of occupation and residence, careless personal habits, slovenly dress, awkward movements or effeminacy. Dr. Sheehan believes that it would be advisable to have at least two or three central training stations to which medical officers should be detailed, who would be specially equipped with training in mental diseases, and whose duty should be the careful secondary examination of all recruits during a probationary period, to assure the exclusion from the service of the potentially insane.

Cooperation with Public Health Service

SURGEON T. W. RICHARDS, U. S. Navy, spoke of the necessity of cooperation of the Public Health Service with the Navy in time of war. In general terms it may be said that the Navy is always on a war footing, because the fleet is ordinarily called on to strike a decisive blow immediately on the outbreak of hostilities, or even before a formal declaration of war. In the event of war, however, quick expansion must follow, and here it is suggested that the institutions of the Public Health Service might and should be placed wholly, or in part, at the disposal of the Navy. The several hospital reservations of the Public Health Service would, he believes, be invaluable adjuncts to the naval service in time of such necessity.

In Time of Peace Prepare For War

SURGEON LIEUTENANT-COLONEL S. HICKSON, R. A. M. C., speaking, by invitation, on the training of medical men for service in war, suggested that it might be well for this country to examine and possibly adopt some of the thorough testing-out methods employed in the English service in its maneuvers. He detailed in brief the methods of imitating practical battlefield work which had been evolved at Aldershot. At the maneuvers at this camp the surgeons of both the regular establishment and the volunteer militia, work out problems from maps, locate field hospitals and dressing-stations, and are shifted from day to day to the different lines of duty which might come on them in actual service. A medical officer may be a good physician and surgeon, but in a military sense he is worthless until he has been tried out under actual war conditions. He cited the experience of Great Britain with civilian medical men during the Boer War as an example of this, and advised the medical officers of this country to meet frequently for instruction by lectures, for discussion and for practice in the technical part of their work, including map reading, all of which would prove invaluable in case of war.

Weakness of Militia Medical Organizations

CAPTAIN HENRY D. THOMASON, M. C., U. S. Army, read one of the most important papers presented, in which he discussed the weakness of the medical corps of the state militia organizations. He declared that while the situation in this regard was now 50 per cent. better than it was two years ago, there was still a woful lack of training and equipment in these branches. The hospital service of the national guard organization should be on a par with that of the regular Army. But this is not the case. Two years ago the field hospital and ambulance equipment of all the national guard organizations of the United States consisted of two field hospitals and one ambulance company. A year later there were twelve field hospitals and eleven ambulance companies, and to June of this year altogether twenty fully equipped field hospitals and sixteen ambulances had been issued to the organized militia. While this improvement, due to the indefatigable efforts of medical officers throughout the country, has been so marked, yet in time of war, the mobilization of the militia would show a deficit of about thirty-five field hospitals and a like number of ambulance companies.

Resignation of Major Lynch

At the morning session, October 4, Major Charles Lynch, M. C., U. S. Army, the retiring secretary, was presented with a handsome silver salver suitably inscribed, bearing testimony to the thorough and painstaking manner in which he had performed the onerous duties of his office.

Entertainment

The committee of arrangements, headed by Capt. J. Harry Ullrich, N. G., Maryland, provided lavish entertainment for the association. This included a reception to the president and a ball at the Hotel Belvedere; an excursion to Annapolis by special train, where the association was received by the governor, and entertained by Superintendent Gibbons at the United States Naval Academy; a theater party; a tea for the ladies at the Arundell Club; an automobile ride around the boulevard system and through Green Spring Valley; and a dance in the Fourth Regiment Armory.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Regular, Little Rock, November 12. Sec., Dr. F. T. Murphy, Brinkley; Homeopathic, Little Rock, November 12. Sec., Dr. P. C. Williams, Texarkana; Eclectic, Marion Hotel, Little Rock, November 12. Sec., Dr. C. E. Laws, Fort Smith.

CALIFORNIA: Los Angeles, December 3-6. Sec., Dr. Charles L. Tisdale, 929 Butler Bldg., San Francisco.

CONNECTICUT: Regular, City Hall, New Haven, November 12. Sec., Dr. Charles A. Tuttle, 196 York Street; Homeopathic, Grace Hospital, New Haven, November 12. Sec., Dr. Edwin C. M. Hall, 82 Grand Avenue; Eclectic, New Haven, November 12. Sec., Dr. T. S. Hodge, 19 Main Street, Torrington.

DELAWARE: State Society and Homeopathic Examining Boards, Dover and Wilmington, December 10-12. Secretary of the Medical Council, Dr. Henry W. Briggs, 1026 Jackson St., Wilmington.

FLORIDA: Regular, Jacksonville, November 11-12. Sec., Dr. J. D. Fernandez.

KENTUCKY: The Armory, Louisville, December 12. Sec., Dr. J. N. McCormack, Bowling Green.

MAINE: City Council Rooms, Portland, November 12-13. Sec., Dr. Frank W. Searle, 776 Congress Street.

MARYLAND: Regular, 1211 Cathedral St., Baltimore, December 10. Sec., Dr. J. McPherson Scott, Hagerstown; Homeopathic, St. Luke's Hospital, Baltimore, December 13-14. Sec., Dr. O. N. Duvall, 1326 N. Mount Street.

MASSACHUSETTS: State House, Boston, November 12-14. Sec., Dr. Edwin B. Harvey, Room 159, State House.

NEBRASKA: State House, Lincoln, November 13-14. Sec., Dr. C. P. Fall, Beatrice.

OHIO: Columbus, December 10-12. Sec., Dr. George H. Matson, State House.

PENNSYLVANIA: Philadelphia, December 3-5. Sec., Nathan C. Schaeffer, Harrisburg.

TEXAS: Dallas, November 13-14. Sec., Dr. J. D. Mitchell, Wheat Bldg., Fort Worth.

VIRGINIA: Richmond, December 17-20. Sec., Dr. Herbert Old, Norfolk.

WEST VIRGINIA: Wheeling, November 11-13. Sec., Dr. H. S. Barbee, Point Pleasant.

Medical Schools and Hospital Expenses

In his presidential address before the American Hospital Association, Detroit, Sept. 24, 1912, Dr. Henry M. Hurd made the following statement regarding the relation of medical schools to hospitals:

"The need of furnishing training to physicians is so largely recognized as the duty of all hospitals situated in the vicinity of medical schools it seems hardly necessary to refer to the matter. I am of the opinion that it is not only essential to do this in the interest of physicians and of the community, but also of the patients in the hospitals. Whenever medical teachers are properly appointed and students are admitted to hospital wards under proper restrictions, it is evident that the diseases of patients are more carefully studied and more skilfully treated than under other circumstances. The tone of the hospital is better, and the medical work is more active and of a higher type. Granting that these benefits flow from medical teaching, and I do so cheerfully and without reserve, I am still compelled to add that such cooperation in teaching adds materially to the expense of the hospital. It should also not be forgotten that access to the wards of a good hospital has become in these modern days one of the best assets of a medical school. For these reasons medical schools ought not to become burdens on hospitals, but should pay a proper proportion of the increased expense which they entail on the hospitals."

Utah October Report

Dr. G. F. Harding, secretary of the Utah State Board of Medical Examiners, reports the written examination held at Salt Lake City, Oct. 7-8, 1912. The number of subjects examined in was 22; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 7, of whom 5 passed and 2 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Rush Medical College	(1912)	75
Northwestern University Medical School	(1912)	78.1
Jefferson Medical College	(1911) 81.5; (1912)	79.7
National University, Athens, Greece	(1899)	76.2
FAILED		
Hahnemann Medical College, Chicago	(1905)	74.2
Queen's University, London, Ontario	(1912)	74.8

Book Notices

THE CARE OF THE INSANE AND HOSPITAL MANAGEMENT. By Charles Whitney Page, M.D. Cloth. Price, $1. Pp. 154. Boston: W. M. Leonard, 1912.

In these days when so many ambitious and theoretically educated young people are rushing into print, either out of a spirit of adventure, or to force a public recognition which their experience and knowledge do not warrant, it is most refreshing to pick up a book like this by Page. Dr. Page writes from an experience extending over thirty-five years in a number of hospitals for the insane, and there is a ring of truth and soundness in what he says that carries conviction. The spirit of the book throughout is an advocacy of the "non-restraint" system of managing insane patients. The author tears the veil ruthlessly from the mysteries that have sometimes been made to surround the management of violent patients without physical restraint, and brings the whole technic down to a question of organization, good judgment and every-day common sense.

It might be said that whole libraries have been written on the management of hospitals for the insane; Dr. Page epitomizes the story when he demands for insane hospitals "a well-constituted governing body;" a sane superintendent, properly supported; a corps of assistants, selected with discrimination and promoted from the ranks as opportunities offer; a good laboratory of pathology, ably directed, and a good nursing corps, created and maintained under conditions that will make for the self-respect of the members and permit ambitions for their future.

It is to be regretted that so widely experienced a director of institutions for the insane has not taken up their architecture and equipment. The last word in insane hospital architecture has not been said; in fact, there are many mooted questions that an acutely interested person with the literary resources of Dr. Page could turn up for discussion and perhaps final solution—such, for instance, as that concerning the mental effect on certain classes of patients in being brought, by force of architectural necessities, into constant association with other patients similarly affected. Imagine, for instance, an island inhabited by misanthropes, pessimists and melancholics! Let us hope that some day Dr. Page will venture on this field and write and illustrate hospital architecture with some of his sane sentiments as the point of initiative.

FRESH AIR AND HOW TO USE IT. By Thomas Spees Carrington, M.D., Assistant Secretary of the National Association for the Study and Prevention of Tuberculosis. Cloth. Price, $1. Pp. 250, with illustrations. New York: National Association for the Study and Prevention of Tuberculosis, 105 E. 22d Street.

The 150 illustrations in this book indicate that the interest in obtaining fresh air is wide-spread, for three-fourths are photographs of apparatus in use. The remainder are line drawings and architects' plans. The book was prepared in answer to requests for information as to methods for procuring fresh air. Practical ways are pointed out under living conditions of every sort, as it is recognized that people must live in surroundings determined by their income. Explicit directions are given for the simpler devices, and as the treatment of the problem becomes more complicated, lists of material and estimates of cost are added. Any of the temporary sleeping-porches illustrated may be built by a good carpenter from a study of the photographs. Simple means of window-ventilation are first described, and then window-tents, roof-bungalows, wall-houses, porches, tent-houses, open-air apartments and cottages, and roof-playgrounds for children. The final chapter treats of clothing, bedding and furniture. The book is for physicians and laymen, for those who need fresh air in the treatment of the sick and those who want it as a means of keeping well or out of pure enjoyment. The chapter on new houses with open-air apartments should be an inspiration to any one who intends to build a home.

DIRECT LARYNGOSCOPY, BRONCHOSCOPY AND ESOPHAGOSCOPY. By Dr. W. Brünings. Translated and Edited by W. G. Howarth, M.A., M.B., B.C., Surgeon in Charge of the Throat Department at St. Thomas' Hospital, London. Cloth. Price, $5 net. Pp. 370, with Illustrations. New York: William Wood & Company, 1912.

This is a revision of Brünings' original work published in German in 1910. A considerable part of the former edition was taken up with a description of instruments that is no longer necessary; therefore this has been omitted and similar space devoted to important clinical material. The instruments used are illustrated and explained, the technic of the operation is described, and the difficulties that are liable to be encountered and the methods of overcoming them are clearly pointed out. The normal appearance and psysiologic action of the parts to be examined are carefully considered and the indications for, and dangers of bronchoscopy and esophagoscopy are discussed. An excellent chapter on treatment of various diseases has been added. The book is a most useful one that can be studied with profit by all those who essay to do tube work. The book is well illustrated and has an excellent index.

MODERN HOSPITALS. A Series of Authoritative Articles on Planning Details and Equipment, as Exemplified by the Best Practice in This Country and Europe. By Edward F. Stevens, A.A.I.A., Edward Pearce Casey, A.A.I.A., and Others. Cloth. Price, $5. Pp 49, with 125 illustrations of Recently Constructed Hospitals, Their Architectural and Technical Equipment. New York: The American Architect, 1912.

This beautifully printed book contains a number of articles on the details of hospital construction and equipment by architects, engineers, physicians and sanitary experts, all of whom speak from practical experience in their several lines with relation to hospitals. The book is finely illustrated with numerous pictures of the latest and best types of modern hospital construction and arrangement, the exteriors, interiors and ground and floor plans being shown. General hospitals as well as those for special purposes are illustrated, and the book should prove of great value to every one interested in hospital construction and equipment.

COMMENTS ON SOME PLANS OF HOSPITAL CONSTRUCTION. By Hermann M. Biggs, M.D., General Medical Officer. Paper. Pp. 61, with illustrations. New York City, Department of Health, Monograph Series, No. 7, 1912.

This number of the monograph series issued by the New York City Department of Health contains descriptions, views, plans and cost of construction of various hospitals erected and maintained by the city, particularly those for housing and caring for infectious diseases, including the tuberculosis hospital at Otisville. In hospital construction three things have been kept in mind by the department: the value of open air in the treatment of all infectious diseases, the desirability of erecting pavilions that could be used interchangeably for all infectious diseases, including tuberculosis, and simplicity and economy of construction and maintenance. The monograph should be of interest and value to those contemplating hospital construction, as giving the experience of New York City rather than the ideas or theories of architects or others.

DIE KARLSBADER KUR IM HAUSE. Ihre Indikation und ihre Technik. Von Dr. Oscar Simon. Paper. Price, 2.40 marks. Pp. 85. Berlin: Julius Springer, 1912.

The author here presents the principles and methods of the drink and bath cure at Carlsbad in such a way that it can be applied at home. He describes the application of the spring water especially in fifteen diseases commonly benefited by resort to Carlsbad.

Medicolegal

Privileged Information in Actions for Services

(Schamberg vs. Whitman (N. Y.), 135 N. Y. Supp. 262)

The City Court of New York, Trial Term, granted the defendant's motion to strike out various allegation of the complaint in this action by a surgeon to recover the reasonable value of his services after a refusal by the patient (defendant) to pay the amount demanded. The court says that the complaint disclosed information which was acquired by the plaintiff while attending the defendant in his professional capacity and which was necessary to enable him to act in that capacity. That was a violation of the provision of the New York Code of Civil Procedure prohibiting the disclosure by a physician or surgeon of information acquired in his professional capacity. Read in connection with the sections in relation to code pleading, the plaintiff might proceed with his action without either directly or indirectly violating that provision. He might set forth a plain and concise statement of facts without unnecessary repetition; that is to say, the issuable or ultimate facts, and not the evidence of those facts. The legislature never intended to deprive a physician of his cause of action for services if he could prove them by proper evidence. The prohibition was against the disclosure of information acquired by and necessary for him to act in his professional capacity. The form in which such statements are made is of no consequence.

Physicians in State Hospitals for Insane as Witnesses

(Liske vs. Liske (N. Y.), 135 N. Y. Supp. 176)

The Special Term of the Supreme Court of New York, New York County, holds that, in an action to annul a marriage on the ground that the defendant was a lunatic at the time of the marriage, the testimony of one of the physicians in charge of one of the state hospitals for the insane, to which the defendant was committed by order of the court, was properly admitted in evidence, although it was contended that it was not admissible under section 834 of the New York Code of Civil Procedure with reference to privileged communications. The court says that the public policy of the state demands the maintenance of such institutions and the care and treatment of the inmates, which necessarily involve their medical examination. The court does not think that the relation arising by operation of law between a patient committed by legal process to a state institution for the insane and the official physicians in charge thereof is within the professional relation contemplated by section 834, or that such section was designed to exclude the testimony of such official physicians, whose duty it is under the police power of the state to make physical examinations of irresponsible patients. The purpose of the protection being here absent, the legislative enactments as to the duties of medical officers in the state institutions for the insane, and as to the making of public records relative to their condition, indicate that the testimony objected to in this case was properly admitted.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Albany (N. Y.) Medical Annals

October, XXXIII, No. 10, pp. 563-624

1 *Syphilis of Stomach. J. Meyers, Albany, N.Y.
2 Surgery of Stomach. C. W. L. Hacker, Albany, N. Y.
3 Cooperation in Medicine. J. H. Gutmann, Albany, N. Y.

1. Syphilis of Stomach.—One personal case is reported by Meyers and sixty from the literature are reviewed. He says that it is a rare manifestation of syphilis, congenital or acquired, occurring mostly in males, especially in the fourth and fifth decades, but also at almost any age. Its pathology is characterized by (1) multiplicity of lesions in many organs, (2) by variety and plurality of lesions in the stomach itself. Its symptomatology corresponds to the pathologic findings; it presents no unanimity of symptoms. There are four symptoms which are, however, fairly common, singly or combined. These are (1) pain, especially immediately after eating, (2) emaciation, (3) tenderness, (4) hemorrhage. Clinically, we should not divide cases of gastric syphilis too strictly, as an exact diagnosis of the form of lesion is often impossible, except by operation or autopsy.

We may classify syphilis of the stomach under (1) ulcer in any part of the stomach and its results, (2) gumma in any part and its sequelae as to tumor, (3) wide-spread infiltrations of gummatous or more fibrous character leading to deformity, cicatrization or involvement of the peritoneum or neighboring organs, (4) a combination of two or more of these. The diagnosis is extremely difficult as a rule. If there be a clear history of syphilis, or if the Wassermann is positive, the diagnosis should be comparatively simple. The proper diagnosis is extremely important, as exitus may occur through hemorrhage, inanition or stenosis, when timely intervention could have cured. Even when properly diagnosed, many of the cases have suffered delays through false diagnosis and treatment. Any form of mercury or the iodids give as brilliant results as are to be found in the practice of medicine.

American Journal of Public Health, New York

October, II, No. 10, pp. 753-824

4 Our Association, Hygiene, Business and Government. J. N. Hurty, Indianapolis.
5 Permissible Limits of Sewage Pollution. G. A. Soper, New York.
6 Some Economic Aspects of Factory Hygiene. W. Talbot, Cleveland.
7 Points of Contact Between Health Officer and Social Worker. H. Folks, New York.
8 Prophylaxis of Bubonic Plague. W. C. Rucker, Washington, D. C.
9 Measles Outbreak in Chicago. G. B. Young, Chicago.
10 Diphtheria-Carriers and Their Relationship to Medical Inspection of Schools. H. Albert, Iowa City, Iowa.
11 *Treatment of Rooms After Diphtheria and Scarlet Fever. H. L. Arms and C. F. Whitney, Boston.

11. Treatment of Rooms After Diphtheria and Scarlet Fever.—From the last of November, 1910, until August, 1912, all fumigations with data made by the Boston Board of Health were kept by one of the authors, who recorded any subsequent cases from that address together with the elapsed time. During this time 2,675 fumigations were made after diphtheria with forty-eight "secondary" cases or 1.8 per cent. and 1,748 fumigations with twenty-seven repeat cases or 1.5 per cent. after scarlet fever. New cases after the fumigations following diphtheria: Four occurred during the first three days and a total of nineteen during the first week; of this number fifteen were sent to a contagious hospital and the fumigation performed within forty-eight hours of the time of the report of the case, consequently the new case had the exposure to either the same source of infection or the first case itself within nine days preceding the report of the new case. Therefore, it would seem quite probable that contact would be more apt to be the cause of the infection than the room which the patient occupied during the short period between the onset of the disease and his removal. The other four cases followed the release of the patient from quarantine after two successive negative cultures on different days and it is a well-known fact that even this does not absolutely rule out the presence of organisms in the nose or throat. During the second, third and fourth weeks there were but sixteen "repeat" cases and of course exposure has been possible during this time. Over four weeks there were thirteen cases from thirty-three to fifty-eight days, but the authors doubt very much if many would consider that these were due to infection from the room.

The "secondary" cases after fumigations following scarlet fever occurred as follows: two within the first three days, a total of twelve within the first week, eight during the second, third and fourth weeks, and seven over four weeks, a total of twenty-seven. Of the twelve during the first week the room was fumigated within forty-eight hours of the report of the case in nine instances, on the third day in one and after convalescence in the other two. Of the entire number nineteen were fumigated within forty-eight hours of the report of the case, two on the third day, one on the tenth day and three after convalescence. The number of "secondary"

cases is raised by having five children in one family taken as follows: Dec. 4, 1911, fumigated the same day; Dec. 7, fumigated the eighth; Dec. 8, fumigated the twelfth; Dec. 15, fumigated the same day and the last one on the nineteenth.

The authors believe that it seems very reasonable to assume that these infections came from persons rather than from inanimate objects. In order to demonstrate the fallacy of fumigation the board has since July 4, 1911, authorized the use of practically no disinfection after diphtheria and scarlet fever, using for each room, no matter what its size, a fumigator which would disinfect not over 500 cubic feet, and it can readily be seen that when this is used in rooms of from 1,000 to 3,000 cu. feet. no real disinfection would be accomplished. The householders were instructed thoroughly to air the room following the "fumigation" and to wash all woodwork. The results have borne out the contention that fumigation after these infections was unnecessary, 63 per cent. of the secondary cases occurring with the smaller amount of fumigation which comprised 57 per cent. of the total number after diphtheria, and, if we except the family detailed above, 59 per cent. of the secondary cases of scarlet fever after the smaller amount of fumigation comprising 61 per cent. of the total number. If the labor of fumigation after diphtheria and scarlet fever would be dispensed with as it has been in many places after measles, and real disinfection carried on after tuberculosis, it seems to the authors that much more good would be accomplished and the public would then realize that it is the individual that is the cause of the spread of the acute infectious diseases in the great majority of cases.

Archives of Internal Medicine, Chicago

October, X, No. 4, pp. 297-404

12 *Fat Metabolism of Lipomas. H. G. Wells, Chicago.
13 *Utilization of Parenterally Introduced Serum. J. H. Austin and A. B. Eisenbrey, Philadelphia.
14 *Low Fever. T. H. Wright and W. Allen, Charlotte, N. C.
15 *Experimental Investigation of Value of Hexamethylenamin and Allied Compounds. C. F. Burnam, Baltimore.
16 *Complete and Permanent Heart-Block Following Use of Digitalis in Auricular Fibrillation. A. E. Taussig, St. Louis.
17 *Adrenal Glands and Blood-Pressure. R. G. Hoskins and C. W. McClure, Columbus, Ohio.
18 *Diagnostic Worth of Glycyltryptophan and Tryptophan Tests in Diseases of Stomach. F. Smithies, Rochester, Minn.
19 *Experimental Study of Racial Degeneration in Mammals Treated with Alcohol. C. R. Stockard, New York.
20 Progressive Interstitial Hypertrophic Neuritis of Childhood of Dejerine and Sottas. W. F. Schaller, San Francisco.

12. **Fat Metabolism of Lipomas.**—The literature lacks satisfactory evidence to establish the generally accepted statement that simple subcutaneous lipomas do not give up their fat to the body during emaciation, although there are certain more or less incomplete observations in support of this contention, and also definite cases which are entirely at variance with it; there is no question that it is correct for fatty sarcomas. All reported analyses indicate that the fats of lipomas are identical with the fats of normal fat deposits. A series of experiments by Wells has also failed to indicate any lack of ability on the part of lipoma tissue to hydrolyze various fats and esters which are also hydrolyzed by normal fatty areolar tissues. No reliable method could be devised which would indicate whether lipomas and normal fat tissues differ in their quantitative action on fats and esters. Lipoma fat is hydrolyzed by pancreatic lipase as readily as is normal human adipose tissue.

13. **Utilization of Parenterally Introduced Serum.**—The author's procedure has been to place each dog on a diet of butter, rendered nitrogen-free by ether extraction, and of cane sugar in quantities sufficient to maintain a minimal nitrogen elimination without producing either diarrhea, glycosuria or vomiting. In order to use changes in the elimination of nitrogen as a basis for deductions concerning the utilization of nitrogenous substances parenterally introduced, the animal must be on a calorically adequate, nitrogen-free diet. A dog on such a diet and receiving intravenously an amount of nitrogen, in the form of dog-serum, approximately equal to that being eliminated, shows no increased elimination of nitrogen. When a foreign serum, as horse-serum, is injected instead of dog-serum, the nitrogen elimination is increased very little, if at all. The dog, therefore, is able to utilize completely for anabolic processes the protein of dog-serum and all, or almost all, of the protein of horse-serum introduced intravenously.

14. **Low Fever.**—For a number of years, but during the past summer particularly, attention has been directed to a clinical picture variously known as "continued fever," "sun fever," "Wilmington fever," "low fever," etc., the only constant symptom of which is a supposedly continuous elevation of temperature. That this supposition is incorrect the authors hold can easily be determined by taking the temperature throughout the twenty-four hours, when it will be found that during the night the "fever" disappears. But as these patients do not feel ill, and do not go to bed, they are seen by the physician only during the day; hence the idea of a continuous elevation of temperature. In their cases they have encountered this low fever in persons who were overworked and underfed. The series comprises three men and six women. It seems to be confined to the most active period of life, between the ages of fifteen and forty years. Social condition and occupation seem to be without effect. Overstrain, mental or physical, is the predisposing cause. These cases all show loss of weight, a secondary anemia of varying degree and poor muscular tone. Their time is spent mostly indoors, and practically no exercise is taken. The caloric value of their diet is always considerably below normal, running from 20 to 28 calories per kilo of body-weight. The usual fatigue symptoms are in evidence, anorexia, nausea, flatulence, constipation or the early morning diarrhea which is liable to accompany any condition in which there is low blood-pressure (as pellagra, sprue, etc.), headache, vertigo, insomnia, early mental and muscular fatigue, backache and aching in the legs and knees.

The physical examination has been uniformly negative. The fever curve itself was the only thing characteristic of the condition. A vacation to the coast or mountains may put an end to the "fever" at once. They believe that this "low fever" is simply an abnormal diurnal variation of the body temperature, due to a temporary instability of the heat-regulating mechanism; this depression of the heat-regulating function being merely one expression of a general functional depression or state of chronic fatigue, dependent on undernutrition and over-strain, and emphasized especially during the summer of 1911 by the unusual heat.

15. **Value of Hexamethylenamin and Allied Compounds.**—Burnam's examinations of the bile, sputum, saliva and cerebrospinal fluid show that even after rather large doses of hexamethylenamin, there appears in them but traces of the drug, certainly in percentages less than 1 to 150,000. Whether this trace is of hexamethylenamin, as seems most likely, or of formaldehyd, it is impossible to state, because the only test which would show it is Hehner's which does not differentiate these two substances. So far as any therapeutic value is concerned, it does not make any difference because, as already shown, solutions of formaldehyd of the weakness indicated, do not possess any antiseptic value. Burnam believes, therefore, that the use of hexamethylenamin for the curing or bettering of, or as a prophylactic against, infections of the bile passages, respiratory passages and cerebrospinal system is illusory, and cannot possibly yield results. In the urine the clinical and bacteriologic findings have conformed in every way with the chemical findings, viz., only those patients who show free formaldehyd have been improved by the drug. The phenylhydrazin-nitroprussid test is simple, and when applied gives the physician an easy method of determining the dose of hexamethylenamin which he should use, and also shows those cases in which no results from this drug can be expected.

The test is of value in determining the efficiency of compounds whose value rests on the liberation of free formaldehyd, and it is to be hoped that an endeavor will be successful in securing a substance which, when taken by the mouth, will be excreted through the kidneys and will liberate formaldehyd in the urine in every case.

Although it has its limitations, Burnam's experiences show that hexamethylenamin, when properly given, in more than half the cases of urinary infection is of immense value, and at the present time superior to any other drug in common use.

16. Abstracted in THE JOURNAL, June 22, p. 1973.

17. **Adrenal Glands and Blood-Pressure.**—The authors summarize their work as follows: Comparison of the amount of epinephrin required to affect blood-pressure with the adrenals intact with the quantity required after occlusion of the adrenal circulation indicates as a maximum an epinephrin secretion of 0.13 c.c. 1:1,000,000 solution per kilo per minute. This value is probably too high. The amount of epinephrin necessary to affect blood-pressure is, on an average, approximately 0.42 c.c. 1:1,000,000 solution per kilo per minute in the intact animal, and 0.55 c.c. after removing the adrenal glands. The characteristic primary effect of epinephrin administered intravenously is lowering of blood-pressure. The quantity required to cause minimal hypertension is several times this quantity, or at least ten to twenty times the amount secreted by the adrenal glands. Incomplete data indicate that peristalsis is depressed by quantities of epinephrin inadequate to raise blood-pressure. Adrenal secretion is not, therefore, a direct factor in the maintenance of the tonus of the vasomotor system. It is probable, then, that other activities controlled by the sympathetic nervous system are not directly dependent on adrenal activity.

18. **Glycyltryptophan and Tryptophan Tests in Stomach Diseases.**—The work done by Smithies in the examination of 1,175 cases makes apparent the following: In this series, more than one-third of the proved cases of cancer of the stomach gave positive glycyltryptophan reactions; more than one-fourth were lactic-acid-positive and about one-thirteenth of the number exhibited the tryptophan test. Diagnosis of malignant disease of the stomach was in each case quite possible, independent of the above chemical reactions. As a test associated with cancer of the stomach, Smithies says that in his series the glycyltryptophan reaction proved more consistent than tests for common organic or existing free amino-acid (tryptophan). While gastric conditions other than cancer exhibit positive glycyltryptophan reactions, in no single class of disease of the stomach is this test obtained so frequently as in cancer. This fact is of considerable significance chemically and, perhaps, etiologically. While cancer of the stomach can doubtless be diagnosticated clinically without the glycyltryptophan test, one cannot state that the study of this and allied reactions will prove valueless. Smithies' work does not show that the tryptophan test is, as has been advanced, pathognomonic of cancer. Low free hydrochloric or total acidity is frequently determined in gastric contents exhibiting positive glycyltryptophan, lactic acid and tryptophan reactions. One cannot state positively that this diminished acidity is causative. Many cases of low acidity were negative to the above tests. Approximately one-half of the positive glycyltryptophan and tryptophan reactions were in gastric extracts containing bile and blood elements. Approximately one-fourth of the negative extracts contained blood and bile elements.

19. **Racial Degeneration in Mammals Treated with Alcohol.**—Guinea-pigs were treated with alcohol by Stockard in order to test the influence of such treatment on their offspring. Male and female animals are given alcohol by an inhalation method until they begin to show signs of intoxication, though they are never completely intoxicated. They are treated for about an hour at a time, six days per week. The treatment in some of the cases has now extended over a period of nineteen months. The animals may be said to be in a state of chronic alcoholism. Fifty-five matings of the alcoholized animals have been made, forty-two of which have reached full term and are recorded. From these forty-two matings, only seven young animals have survived, and five of them are unusually small, though their parents were large, vigorous guinea-pigs.

The following combinations were made: 1. Alcoholic males were mated to normal females. This is the paternal test, and is the really crucial proof of the influence of alcohol on the germ cells, since the defective offspring in this case must be due to the modified spermatozoa, or male germ cells, from which they arise. Twenty-four matings of this type were made, fourteen of which gave no result or very early abortions; five still-born litters were produced, consisting of eight individuals in all, and five living litters containing twelve young. Seven of these twelve died soon after birth, and only five have survived. Four of the survivors are from one litter and the fifth is the only living member of a litter of three. 2. Normal males were mated with alcoholic females. This is the maternal test. In such cases the alcohol may affect the offspring in two ways—by modifying the germ cells of the mother or acting directly on the developing embryo in utero. Only four such matings were tried. One gave no offspring; three living litters were born, one consisting of three premature young that died at birth, while the other two litters consisted each of one young, which have survived. The alcoholic treatment in one of the last cases was only begun after the mother had been pregnant for about three weeks. 3. Alcoholic males were mated to alcoholic females. This is the most severe test, both parents being alcoholic. Fourteen such matings gave in ten cases no offspring, or very early abortions. Three still-born litters were produced, consisting in all of six individuals, while only one living young was born. This single offspring from the fourteen matings died in convulsions on the sixth day after birth. The young that have died in the experiment showed nervous disorders, many having epileptic-like seizures, and all died in convulsions.

Nine control matings in the same group of animals have given nine living litters, consisting in all of seventeen individuals, all of which have survived and are large, vigorous animals for their ages. Two young from non-alcoholic parents died, but this mother also died two days later. Her diseased condition doubtless affected the suckling young. Forty-two matings of alcoholic guinea-pigs have given only eighteen young born alive; and of these only seven, five of which are runts, survived for more than a few weeks, while nine control matings have given seventeen young, all of which have survived and are normal, vigorous individuals. These facts convincingly demonstrate the detrimental effects of alcohol on the parental germ cells and the developing offspring.

Boston Medical and Surgical Journal

October 24, CLXVII, No. 17, pp. 567-602

21 *Muscle-Training in Treatment of Infantile Paralysis. W. G Wright, Boston.
22 Scattering Notes on Arthritic Disease. H. W. Marshall, Boston.
23 *Excretion of Formaldehyd by Kidneys of Patients Taking Hexamethylenamin; Study of Burnam's Test. O. R. T. L'Esperance, Boston.

21. **Muscle Training in Infantile Paralysis.**—The problem of bringing back the maximum of strength to the weakened muscles, Wright says, can only be solved by carefully supervised exercises. In most cases the duty of supervision falls best on the parents, who must first be trained by the family physician. It is for his guidance in prescribing the exercises and from time to time changing them as the muscles gain in strength that this paper has been written. It therefore assumes a knowledge of muscle and joint anatomy, but goes into detail concerning the exercises, with which the physician is presumably unfamiliar.

It has been Wright's experience, during the six years in which she has been the assistant of a surgeon in the treatment of infantile paralysis by muscle training, massage and electricity, that better results have been obtained from the combination of physician and parent than where the management of the exercises has been left to an unskilled gymnast or masseur, who has neither the scientific knowledge of the physician nor the patience and enthusiasm of the parent. The training of the muscles should be begun as soon as the patient can move his limbs freely without pain. In most cases this will be from three to six weeks after the initial attack. The principles which underlie the training of muscles which have partially or wholly lost their power of voluntary contraction as a result of infantile paralysis do not in any way differ from those underlying the development of normal muscles. The result in both instances is an improvement in the nutrition of the muscle fiber and in the facility with which the nerves carry their impulses. The method employed by Wright is described in detail.

23. **Excretion of Formaldehyd by Kidneys of Patients Taking Hexamethylenamin.**—The Burnam test was applied by L'Esperance to the urine of more than 250 patients taking hexamethylenamin by mouth. The urine of some patients received several tests at various times under variable conditions. The results of 250 urines were that 130 or 52 per cent. showed the presence of formaldehyd (or were positive); 120 or 48 per cent. did not show the presence of formaldehyd (or were negative).

Colorado Medicine, Denver

October, IX, No. 10, pp. 283-320

24 Medical Progress. W. A. Jayne, Denver.
25 Neglected Factors in Diagnosis of Heart Disease. C. L. Greene, St. Paul.

Delaware State Medical Journal, Wilmington

October, III, No. 11, pp. 1-26

26 Protest Against Incautious Use of Silver-Nitrate Solutions in Ocular Inflammations. B. F. Baer, Philadelphia.

Journal-Lancet, Minneapolis

October 1, XXXII, No. 19, pp. 507-534

27 *Unifying Medical Profession. J. A. Witherspoon, Nashville, Tenn.
28 Neglected Danger from Anesthesia. R. S. Hart, Hazel, S. Dak.
29 Post-Rheumatic Ankylosis. R. St. J. Perry, Parkers Prairie, Minn.
30 *Blood-Vessel Anastomosis. J. F. Corbett, Minneapolis.
31 New Public Health. H. W. Hill, Ontario, Canada.

October 15, No. 20, pp. 535-560

32 Surgical Notes on Goiter. A. Schwyzer, St. Paul.
33 Anatomy of Female Ureter and Methods of Repair of Injured Ureters. M. C. Johnston, Aberdeen, S. Dak.
34 *Perinephritic Abscess. E. C. Robitshek, Minneapolis.

27 and 30. Abstracted in THE JOURNAL, September 7, p. 824.

34. **Perinephritic Abscess.**—The chief symptoms of perinephritic abscess which Robitshek says should aid in the diagnosis are, first, the history; second, urine analysis; third, the range of pulse and temperature; fourth, the leukocytic count; fifth, and most important, the ever-present point of tenderness between the internal oblique, the twelfth rib and the erector spinae muscles. As in all cases of suppuration, the treatment is surgical and should be instituted as soon as the diagnosis is made, in order to prevent the pus from burrowing and possibly perforating into the lungs or other organs. Incisions should be made into the outer edge of the lumbar quadratus muscle, in the costo-iliac space. The incision should be made large enough to prevent a too-rapid healing. If the pus is in the adipose tissue it will now come out, but if beneath the fibrous capsule of the kidney, this capsule must be incised. Secondary pockets should be carefully looked for. The origin of the pus may still remain in doubt, and for this reason the kidney should be raised up into the wound, and both it and the ureter carefully inspected. A nephrotomy might be indicated and should be performed, but generally later if pus has been found, although nephrotomy usually ends in nephrectomy. After the preliminary opening of the abscess, drainage-tubes and gauze should be inserted into the deepest portion of the wound, and thorough drainage instituted. As the pus decreases and the wound tends to heal, the tube and gauze are gradually removed. Sometimes, a troublesome discharging fistula remains in which case a second opening of the wound is necessary, in order to ascertain the reason of the continued discharge.

Journal of Arkansas Medical Society, Little Rock

October, IX, No. 5, pp. 113-135

35 Pathology of Different Lesions of Syphilis. L. R. Ellis, Hot Springs.
36 *Diagnostic Value of Reaction Following Intravenous Injection of Salvarsan, with Therapeutic Value of Drug. A. H. Cook, Hot Springs.
37 *Drainage-Tube for Female Bladder. B. C. Dorr, Batesville.

36 and 37. Abstracted in THE JOURNAL, June 29, pp. 2017 and 2048.

Journal of Missouri State Medical Association, St. Louis

October, IX, No. 4, pp. 107-132

38 Psychotherapy. G. W. Goins, Breckenridge.
39 Diagnosis of Nephritis. W. Engelbach, St. Louis.
40 Training of Nurses for Service in State Hospitals for Insane. M. A. Bliss, St. Louis.
41 Clinical Methods: The Eye. P. I. Leonard, St. Joseph.
42 *Epithelioma of Lower Lip; Report of Case. E. H. Skinner, Kansas City.
43 Experimental Work on Antirabic Immunisation with Desiccated Virus. D. L. Harris, St. Louis.
44 Need of Further Development of County Medical Society. L. Mallette, Parma.
45 Hemorrhagic Diathesis. D. E. Broderick, Kansas City.

42. **Epithelioma of Lower Lip.**—There are several elements of interest in Skinner's case. First, the involvement was more on the skin than on the mucous margin of the lip. Therefore, there was less lymphatic drainage than if the mucous membrane alone was involved, and consequently a better chance for an early and permanent cure. Second, the Roentgen-ray produced a recession of the growth after surgical, medical and caustic measures had been employed with care and skill, but without result. Third, the protected and measured dose of the Roentgen-ray promoted a progressive improvement without any danger or discomfort to the patient. The response to the Roentgen-ray was evident on the third treatment. After twelve exposures the hard indurated edges had entirely softened; the ulcer was reduced to a third of its former size; the mucous margin was entirely healed, with a healthy pink glow to the mucous membrane; the edges of the skin margin were drawn and puckered. Treatments were then reduced to twice weekly. After twelve more treatments the skin was entirely closed over a soft and yielding lip. No pain has been experienced after the second treatment. The patient has been seen frequently during the last two years and no recurrence or untoward symptoms have been displayed since May, 1911.

Journal of South Carolina Medical Association, Seneca

October, VIII, No. 10, pp. 262-284

46 Management of Normal Pregnancy and Labor. B. L. Chipley, Calhoun Falls.
47 Case of Uterine Fibroid Complicated by Pregnancy. J. B. Britt, Princeton.
48 Preventive Medicine in Private Practice. F. Moore, Aiken.

Lancet-Clinic, Cincinnati

October 12, CVIII, No. 15, pp. 379-406

49 Treatment of Gonorrheal Rheumatism. C. J. Broeman, Cincinnati.
50 Medical Treatment of Inebriety. T. D. Crothers, Hartford, Conn.
51 Synthetic Study of Latent or Larval Forms of Tuberculosis in Infants. B. F. Lyle, Cincinnati.
52 Bismuth Poisoning; Report of Case. J. C. Oliver and F. B. Samson, Cincinnati.

October 19, No. 16, pp. 407-438

53 Cystoscope as Aid in Urinary Diagnosis and Treatment. A. W. Nelson, Cincinnati.
54 Direct Cycle of Protozoon. H. G. Graham, Elmdale, Kan.
55 Public Prophylaxis Against Venereal Diseases. A. Ravogli, Cincinnati.

Medical Record, New York

October 26, LXXXII, No. 17, pp. 737-786

56 Some Studies in Family History. R. Symonds, New York.
57 Progressive Curvature of Radius (Madelung's Deformity) Corrected by Osteotomy. H. L. Taylor, New York.
58 *Some Clinical Observations in Three Cases of Huntington's Chorea. M. A. Bahr, Indianapolis.
59 Two Cases of Seventh-Nerve Paralysis Secondary to Artificial Congestion. B. Rosenbluth, New York.
60 Indicanuria and Chlorida. J. C. Warbrick, Chicago.
61 Treatment of Interstitial Keratitis by Salvarsan. G. W. Vandegrift, New York.

58. **Huntington's Chorea.**—In the three cases reported by Bahr heredity appeared to be a constant factor, all three cases were in women, and the disease developed in all three after the thirtieth year of age and before the fortieth year of age. There appeared to be a decided tendency toward paranoid ideas. A defective hereditary endowment was noted in these cases. Two cases presented psychoses in the ancestry aside from the chorea.

New York Medical Journal

October 26, XCVI, No. 17, pp. 825-880

62 Inheritance of Acquired Characters. J. Wright, New York.
63 Membranous Pericenteritis. A. E. Isaacs, New York.
64 Pedunculated Sarcoma and Myxoma of Larynx. A. M. MacWhinnie, Seattle, Wash.
65 Fractures of Skull. E. P. Magruder, Washington, D. C.
66 Medical Economics. T. F. Reilly, New York.
67 Ten Sex Talks to Girls. I. D. Steinhardt, New York.
68 Specific Therapy of Cancer. I. Levin, New York.
69 Pathologic Relations of Urine to Mental and Nervous Diseases. S. R. Klein, Chicago.
70 Femoral Varix. P. T. Geyerman, Hot Springs, S. Dak.

New York State Journal of Medicine, New York

October, XII, No. 10, pp. 549-618

71 Some Cases Illustrating Ocular Disturbances Due to Disease of the Nose and Accessory Sinuses. J. E. Weeks, New York.
72 Keratitis Neuro-Paralytica After Removal of Gasserian Ganglion. W. B. Weidler, New York.

73 Some Common Results of Eye-Strain. W. R. Broughton, New York.
74 Occupational Diseases of Eye. W. A. Holden, New York.
75 Blindness as Result of Inflammatory Disease Affecting Conjunctiva and Cornea. C. W. Cutler, New York.
76 Blindness from Toxemia. A. Knapp, New York.
77 Some Ocular Observations in Brain Tumor. S. Voorhees, Elmira.
78 Three Cases of Family Periodic Paralysis. C. E. Atwood, New York.
79 *Spontaneous Fracture as Initial or Early Symptom of Tabes Dorsalis. H. L. Taylor, New York.
80 Symptomatology of Cerebral Abscess, with Special Reference to Diagnosis and Indications for Surgical Intervention. L. Archambault, Albany.
81 Pathologic Anatomy of Goiter. W. C. MacCarty, Rochester, Minn.
82 Results of Early Diagnosis of Urinary Tuberculosis. W. F. Braasch, Rochester, Minn.
83 Diagnosis and Treatment of Intestinal Obstruction. C. A. McWilliams, New York.
84 Present Status of Cancer. R. G. Loop, Elmira.
85 Rôle of Education in Prevention of Insanity. C. M. Campbell, White Plains.
86 Responsibility of Country Practitioner in Relation to Public Health. E. T. Bush, Horseheads.

79. Fractures in Tabes Dorsalis.—The nine cases observed by Taylor are sufficient indication that spontaneous fracture in tabetics cannot be very rare; and the fact that in the first seven cases the practically painless fracture occurred before there was any disturbance of the ordinary gait, and had not led, so far as could be ascertained, to the diagnosis of tabes, is Taylor's reason for calling attention to its importance as an early symptom of diagnostic importance. Seven of the nine patients gave a history of lues from eight to twenty-four years before the fracture, but believed themselves to have recovered under treatment; seven at the time of fracture were working at their ordinary occupations, and considered themselves well. The fracture was in each case produced by such activities as are, or may be, practiced daily without harm, by ordinary individuals. In each of the nine patients the fracture was painless or nearly so, and while the fracture was often slow in healing, all (except one not traced and one with a loose fragment) finally united, under rest and fixation, usually with a very large callus, giving a useful limb. Most of these patients had been treated for their fractures before applying for advice, and sought help for a stiff knee, or complicating, or subsequent Charcot joint. In these cases it was only by careful questioning or study that the preceding fracture was discovered.

In several cases the fracture had occurred years before, and was discovered almost accidentally through the large callus or the history. In all the cases but two the patient had suffered from persistent but irregular, sharp, shooting pains in the trunk or limb, or both, before the fracture, and this, Taylor says, would indicate that pains of this character are among the earliest striking symptoms of tabes and that careful attention should be paid to them in general practice. Adults, especially men, presenting this symptom should be carefully examined for tabes. In two cases ophthalmoplegia had also preceded the fracture. In two cases, so far as could be ascertained, the patient was aware of no symptoms preceding the fracture. In the last two cases the patients had been markedly ataxic for years, and were known to be suffering from tabes. None of the first seven patients presented any ataxic gait at the time of the fracture except one patient who was aware of some difficulty when walking in the dark. Several of the patients are still without the ataxic gait, though several years have elapsed since the fracture in some instances.

The cases reported were: 1. Spontaneous fracture right patella. Myositis ossificans of rectus cruris. 2. Spontaneous fracture left internal tuberosity of tibia. 3. Spontaneous fracture of left femur. Right and left Charcot hip. Tabes. 4. Spontaneous fracture left femur (twice). Right Charcot knee. Tabes. 5. Spontaneous fracture left femur. Right Charcot knee. Tabes. 6. Spontaneous fracture right femur. Tabes. 7. Spontaneous fracture of right astragalus. Charcot astragaloscaphoid joint. Tabes. 8. Tabes. Fracture left humerus. Spontaneous fracture left tibial tuberosities. 9. Tabes. Spontaneous fracture of right femur. 10. Lues. Spontaneous fracture of femur.

Taylor concludes that spontaneous fractures are not infrequently an initial or early symptom of tabes. Such fractures occur frequently before there is any disturbance of gait. All adults who have had painless or spontaneous fractures should be examined for tabes. Tabetics should avoid sudden or jerky movements, especially heavy lifting, and twisting movements. Charcot joints may also be an initial or early symptom of tabes. Persistent attacks of shooting pains in the trunk or limbs should always lead to an examination for tabes. The term tabes dorsalis should be preferred to the misleading "locomotor ataxia," since an ataxic gait is not infrequently one of the latest symptoms to appear.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

October, XV, No. 4, pp. 175-229

87 Some Practical Uses of Electricity, with Report of Several Cases. R. L. Pittman, Fayetteville, N. C.
88 *Spontaneous Healing of Superficial Ulcer with Malignant Metastasis After Six Years' Latency. B. C. Willis, Oshkosh, Wis.
89 Cancer and the Public. W. K. McCoy, Gum Spring, Va.
90 Most Common Mistakes Made in Administration of Ether; Few Suggestions as to Their Corrections. M. J. Alexander, Richmond, Va.
91 Medical Ethics. I. W. Surratt, Sylvatus, Va.
92 Medicine in Lay Literature. B. M. Randolph, Washington, D. C.

88. Spontaneous Healing of Superficial Ulcer.—Six years ago Willis' patient developed a slow, superficial ulcer near left angle of lower lip, "mere loss of skin." He consulted a physician regarding this, and he prescribed a drying salve (no arsenic preparation), as the place did not look even suspicious of malignancy. Under treatment the ulcer gradually healed. The patient thinks that three or four months would cover the entire duration of this ulcer. On April 8, 1912, the patient again presented himself to his physician, stating that four and a half months ago a small lump freely moveable and size of a pea was felt at left angle of lower jaw, which has gradually increased in size, but he has suffered no pain nor had it ulcerated at any time. No thickening was felt nor scar seen at left angle of lower lip. Beneath ear and under angle of left jaw were several discrete, hard, freely moveable lumps, size of hickory nuts. One gland behind cephalic end of sternomastoid size of almond, seemed attached to the muscle structure. The parotid, submaxillary and all lymph-nodes were removed, including those in the posterior cervical triangle. On section, these glands were grayish-white, hard and glistening. Frozen section was made and microscopically the growth was seen to be an epithelioma spinocellularis malignum. The epithelial cells were unusually large and many mitotic figures were observed; hence an unfavorable prognosis was made to relatives. Recurrence at end of three months.

Ohio State Medical Journal, Columbus

October 15, VIII, No. 10, pp. 503-554

93 *Fundamental Factors in Cardiac Conditions. P. G. Woolley, Cincinnati.
94 Indications for Use of Obstetric Forceps. S. J. Goodman, Columbus.
95 Mills-Reincke Phenomenon. M. Friedrich, Cleveland.
96 *Early Diagnosis and Treatment of Syphilitic Disease of Central Nervous System. E. M. Baehr, Cincinnati.
97 Guarded Prognosis in Injuries to Cornea. F. Jacobi, Toledo.
98 Treatment of Hip-Joint Disease. L. G. Bowers, Dayton.

93 and 96. Abstracted in THE JOURNAL, May 25, pp. 1629 and 1631.

Southern Medical Journal, Nashville, Tenn.

October, V, No. 9, pp. 583-656

99 *Gradual Elimination of Preventable Disaster from Surgery. M. H. Richardson, Boston.
100 Tuberculosis. P. J. Glass, Mobile, Ala.
101 *Case of Giant-Celled Sarcoma of Jaw. B. W. Fontaine, Memphis, Tenn.
102 Value of Vital Statistics and Their Relation to Public-Health Work. W. H. Brooker, Raleigh, N. C.
103 Necessity for Collecting Vital Statistics. H. B. Wood, Rochester, Minn.
104 Fibroid Tumors of Uterus; Treatment. J. H. Carter, Memphis, Tenn.
105 Abdominal and Pelvic Drainage. E. P. Hogan, Birmingham, Ala.
106 Pus Tubes; Pelvic Abscesses. F. D. Smythe, Memphis, Tenn.
107 *Early Diagnosis of Filariasis. D. Rivas and A. J. Smith, Philadelphia.
108 Inguinal Hernia. L. Sexton, New Orleans.
109 Abdominal Drainage and Through-and-Through Suture. H. A. Elkourie, Birmingham, Ala.
110 Intubation. J. J. Waller, Oliver Springs, Tenn.
111 Ileocecal Adhesions (Lane's Kink). W. Kohlmann, New Orleans.

99. Abstracted in THE JOURNAL, May 11, p. 1473.

101. **Giant-Celled Sarcoma of Jaw.**—The subject of this report, a male, white, aged 14 years, was referred to Fontaine for diagnosis with a history of the growth having appeared following a contusion of the jaw from a baseball six months previously. The tumor had apparently begun about the first bicuspid tooth, and it finally presented a red, fumigating mass the size of a large walnut, entirely surrounding the two bicuspids and the canine tooth. Aside from a stomatitis and quite a severe secondary anemia, there were no constitutional symptoms and no evidence of metastasis. The condition was accompanied by considerable pain and discomfort to the patient in the mastication of food, and it was on this account that he came for consultation. Microscopic examination of the tumor showed that it consisted largely of spindle-cells, through which were distributed giant-cells, or myeloplaxes, varying in size and containing from five to thirty nuclei which were of uniform size and evenly distributed through the body of the cell. The points of interest in the case are its relation to traumatism, the low malignancy of the tumor, the absence of metastasis and the radical cure after complete excision.

107. **Early Diagnosis of Filariasis.**—The authors conclude from careful study of cases that filaria embryos are found in the peripheral blood at all times of the day and night. The periodicity of filaria embryos in the peripheral blood is a matter of a relative number of embryos circulating in the blood and not a matter of absolute absence of them from the capillaries. Filaria embryos are found in the capillaries. Filaria embryos are found in the capillaries as well as in the venous blood, their number being probably always greater in the capillaries. The acetic acid method as described is an expedient and efficient procedure in the early diagnosis of filariasis. By this method the embryos can be demonstrated in the blood as soon as the adult filariae reach maturity and begin to discharge them, which in all probability takes place before the obstructive symptoms of filariasis are manifested. Finally, since the acetic acid method gives a reliable result, regardless of the time at which the blood is examined, this method avoids the inconvenience of having to make the examination at given hours as usually recommended.

Texas State Journal of Medicine, Fort Worth

October, VIII, No. 6, pp. 157-179

112 Responsibilities of Profession in Conservation of Child Life. J. W. Amesse, Denver.
113 Conservation of Public Health. J. F. Corry, Rockwall, Tex.
114 Safest Route to Surgical Operation. F. L. Barnes, Trinity, Tex.
115 Case of Mycetoma. H. Allison, Kingsville, Tex.
116 Tonsillotomy or Tonsillectomy, Which? C. Joyes, Fort Worth, Tex.
117 Placenta Praevia. T. S. Ragland, Gilmer, Tex.

Ophthalmic Record, Chicago

October, XXI, No. 10, pp. 519-576

118 Burns of Eyeball from Contents of So-Called "Water-Core" Golf-Balls. C. A. Wood, Chicago.
119 An Ophthalmic Pilgrimage. T. Smith, Queensland, Aus.
120 Case of Melanotic Sarcoma of Ciliary Body. H. T. Aynesworth, Waco, Tex.

Ophthalmology, Seattle, Wash.

October, IX, No. 1, pp. 1-152

121 Newer Operations for Glaucoma. L. W. Fox, Philadelphia.
122 Unilateral Glaucoma from Congenital Malformation. L. Dor, Lyons, France.
123 Technic and Mode of Action of Recent Operations Proposed for Retinal Detachment. P. Bettremieux, Roubaix, France.
124 Case of Tumor of Pontile-Cerebellar Angle. M. Danis and J. Geerts, Brussels.
125 Leproma of Iris Cured by Radium-Therapy. J. de J. Gonzalez, Leon, Mexico.
126 Present Operative Treatment of Trachoma, with Description of Author's Method of Grattage with Strips of Sterilized Sand-Paper. D. H. Coover, Denver.
127 Recurrent Third-Nerve Paralysis, with Report of Case. J. F. Klinedinst, York, Pa.
128 Optometry Question. L. Stricker, Cincinnati.
129 Axis, Objectively in Retinoscopy. W. L. Pannell, New York.
130 Guarded Prognosis in Injuries to Cornea. F. Jacobi, Toledo, Ohio.
131 Intracapsular Cataract Operation from Viewpoint of Assistant. J. W. Millette, Dayton, Ohio.
132 Revolver Bullet in Chiasm; Consecutive Binocular Blindness. J. N. Roy, Montreal, Canada.
133 Homeopathy in Ophthalmology. D. A. Strickler, Denver.
134 Recurring Neuritis. H. Terlinck, Brussels.
135 Malingering (Pretended Blindness). F. C. Todd, Minneapolis, Minn.
136 Some Clinical and Pathologic Aspects of Glaucoma; Retrospect of Two Hundred Cases. F. Tooke, Montreal.
137 Vision in Relation to Marksmanship. E. J. Grow, U. S. Navy.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Australasian Medical Gazette, Sidney

August 31, XXXII, No. 9, pp. 215-242

1 Children's Teeth. W. N. Robertson.
2 Some Cases of Skin Disease. E. H. Molesworth and A. Verge.

September 7, XXXII, No. 10, pp. 243-266

3 Dilated Veins of Trunk, a Sequel to Renal Growth. J. B. Nash.
4 Organization of Profession. F. W. Harlin.

September 21, XXXII, No. 12, pp. 295-320

5 Injuries and Diseases of Man in Australia Attributable to Animals (Except Insects). J. B. Cleland.
6 Anesthetics. J. W. Bean.
7 Present-Day Methods of Administering Anesthetics. D. S. MacKenzie.

British Medical Journal, London

October 12, II, No. 2702, pp. 913-1004

8 Some Cardiac Problems. T. W. Griffith.
9 Length of Life of Rat-Flea Apart from Its Host. W. Nicoll.
10 *Diagnosis and Treatment of Early Cardiac Complications of Rheumatism. D. B. Lees.
11 Pathogenesis, Diagnosis and Medical Treatment of Gastric Ulcer. B. Dawson.
12 Quantitative Regulation of Diet in Diabetes. P. J. Cammidge.
13 Treatment of Syphilis with Salvarsan and Neo-Salvarsan. T. W. Gibbard and L. W. Harrison.
14 *Treatment of Pulmonary Tuberculosis, Including Continuous Antiseptic Inhalation. C. Muthu.
15 Some Further Experiences of Artificial Pneumothorax (Nitrogen) in Treatment of Pulmonary Tuberculosis. S. V. Pearson.
16 *Tuberculin in Diagnosis and Treatment of Tuberculous Diseases. L. D. Parsons.
17 Estimation of General Improvement in Pulmonary Tuberculosis. F. R. Walters.
18 Cause and Treatment of Certain Cases of Neurasthenia. F. W. Brook.
19 More Systematic Dorsal Apical Percussion; Oval Interspinous Dulness as Aid to Early Diagnosis. W. Ewart.

10. **Early Cardiac Complications of Rheumatism.**—Lees' first proposition is that the disease which, for want of a better name, we still call "acute and subacute rheumatism," is a bacterial infection, most common and most virulent in childhood, less common and usually less virulent in adolescents and in young adults. Second, an acute dilatation of the left ventricle can always be detected by careful percussion in every acute or subacute rheumatic attack both in children and adults. Dilatation of the left ventricle (greater or less) appears to be an inevitable manifestation of the disease and one of its earliest symptoms. Third, the practitioner ought to have no difficulty in determining this essential fact. All that is required is a correct method of percussion and a little careful observation. By light percussion on the terminal phalanx of a finger of the left hand it is quite easy to ascertain the limit of the left ventricle in the third, fourth and fifth intercostal spaces, and the limit of the right auricle in the third and fourth spaces to the right of the sternum.

In a rheumatic attack the left ventricle will almost always be found to reach the nipple line; usually it extends beyond it, possibly as much as a fingerbreadth, or in a severe case even two fingerbreadths. The cardiac impulse will be diffused and weak, the pulse-wave feeble, the first sound at the apex much enfeebled, the second sound at the base (and especially the pulmonary second) abnormally loud. In many cases, but by no means in all, there will be at the apex a systolic blowing presystolic murmur, and sometimes also a local reduplication of the second sound. The second element of this sometimes develops into a mid-diastolic murmur. A short blowing presystolic murmur, or what sounds like a presystolic reduplication, is sometimes audible to the right of the nipple line. In cases of great severity, where the dilatation is great, there may also be evidence of pericardial friction. Aortic murmurs are rare in a first attack.

Fourth, the first essential for the successful treatment of the cardiac implication of rheumatism is prolonged rest. A reduction of ten beats per minute secured by the recumbent position is equivalent to a diminution of the number of beats by 600 per hour, 14,400 per day, and 100,800 per week. Fifth, it is the duty of the practitioner, not merely to keep the patient at rest in bed, but also to submit him to a careful but thorough antirheumatic medication. This is specially necessary when the patient is a child. Sore throat, pains in the joints, muscles, or tendons, erythema, arthritis, subcutaneous and subperiosteal

nodules, pain in the chest, shortness of breath, marked pallor, and choreic movement (however slight) are all symptoms more or less strongly suggestive of rheumatism and demanding an antirheumatic medication.

Lees' experience has led him to the conclusion that sodium salicylate conjoined with sodium bicarbonate, in the proportion of one part of the former with two parts of the latter, is a most effective antirheumatic medication, if the dose is gradually increased to a sufficient extent. Certain unpleasant symptoms are undoubtedly caused by salicylate, such as vomiting and tinnitus, and some individuals are much more prone to these side-effects than others. Yet, in the great majority of cases, this difficulty may be overcome by a proper method of administration. If, when symptoms such as vomiting or tinnitus occur, the medicine is suspended for a few hours, and is then given again in smaller doses than before, half or two-thirds of the former dose, it will usually be found that the unpleasant symptoms pass away, and the dose can be raised to a considerably larger amount without causing their recurrence. If they do recur, another pause, followed by a reduction, will usually be successful.

In this way it is possible to train almost all patients to tolerate much larger doses of the drug than those generally administered. In a rheumatic attack it is often desirable to increase the amount of salicylate to 150 or 200 grains per day, with double the amount of sodium bicarbonate, given in ten doses. It may be desirable to increase the amount still further, even to 350 or 400 grains. The largest dose Lees has ever given was 60 grains ten times daily, in the case of a boy of 16 who had an enormous crop of rheumatic nodules, about 250 in all, with pericarditis, endocarditis, dilated heart and moderate arthritis. The maximum amount of 600 grains of salicylate and 1,200 grains of bicarbonate was given for two days. The dose had been gradually increased to this amount without any difficulty. After this he took 500 grains of salicylate and 1,000 of bicarbonate for six days a week for three weeks. The amount was then gradually reduced. Every one of his nodules disappeared under this treatment, his pericardial friction soon vanished, his heart became smaller, and he left the hospital with merely a short presystolic and a short systolic murmur at his apex. He has since then been in the hospital for a short time with a very much milder rheumatic attack.

Cases of chronic rheumatism in adults, with subacute exacerbations, which show no sign of improvement under 200 or 300 grains of salicylate daily, will sometimes be definitely cured when the amount is raised to 450 or 500 grains. During the treatment by salicylate it is necessary: (1) to prevent constipation; (2) to keep the urine slightly alkaline; (3) to stop the medicine when vomiting or other symptom due to salicylate occurs, but to resume it after a few hours in a dose of one-half the size of the dose last given, and soon to increase the amount as far as possible. When the dilatation (with or without endocarditis) is great, and especially when pericarditis is present, the medicine should be freely given, and an ice-bag should be kept permanently over the precordial region, with due precautions against general chill. Careful nursing is essential. The application of leeches is often beneficial.

14. **Treatment of Pulmonary Tuberculosis.**—Muthu still believes that volatile vapors continuously used enter the alveoli and have a direct action on the pathogenic organisms, inhibiting their growth and activity, and cutting short the morbid process in the lungs. This, he says, is clinically proved by the reduction of temperature, cough and sputum, gradual disappearance of tubercle bacilli, and final arrest of the disease. Some patients improved so rapidly by its continuous use that it was impossible to attribute their improvement to anything else. Although he has used the inhalation in many hundreds of cases he has had no ill effects from its use. Patients use weaker solutions to begin with, and as they get accustomed to them they go on to stronger mixtures. Muthu uses mainly two kinds of solutions, one a mixture of liquor formaldehydi (in 2½, 5 and 7½ per cent. strengths), with guaiacol, menthol, pine, chloroform and rectified spirit; and the other is a stronger solution containing guaiacol, iodin, terebene, pine, chloroform and rectified spirit. In 1911, leaving out those who only stayed a few weeks in the sanatorium, forty-two patients went through the treatment from three to ten months. Placing them under six divisions: Twenty made an excellent recovery; they had no physical signs and no bacilli in the sputum. Six greatly improved; they had no temperature, very few physical signs; had they remained a little longer they would have made a complete recovery and been placed in the first division. Five moderately improved; they had no temperature, areas of disease smaller, expectoration less, physical signs improved. Six improved; temperature reduced, gained some weight, physical signs improved. Four went back. One died of hemoptysis.

16. **Tuberculin in Diagnosis.**—Parsons recommends the use of tuberculin in gradually increasing doses until large doses are tolerated without reaction for treating all cases of tuberculous disease.

Journal of Laryngology, Rhinology and Otology, London

October, XXVII, No. 10, pp. 521-576

20 Operative Treatment of Labyrinthine Vertigo in Non-Suppurative Disease of Internal Ear. W. Milligan.
21 Technic of Regional Anesthesia in Rhino-Laryngology. J. Broeckhaert.
22 Case of Acute Cerebrospinal Meningitis of Nasal Origin. H. L. Gregory.

Journal of Tropical Medicine and Hygiene, London

October 1, XV, No. 19, pp. 289-304

23 Blackwater Fever in Burma. L. G. Fink.
24 Comments on Dr. Lawrence G. Fink's Article on Blackwater Fever, of September 15, 1911. H. M. James.

Lancet, London

October 12, II, No. 4650, pp. 997-1058

25 Ventral Hernia. W. H. Battle.
26 Septic Thrombosis of Left Sigmoid, Left Cavernous and Left Inferior Petrosal Sinuses. C. A. Ballance.
27 Prevention and Cure of Beriberi. H. Fraser and A. T. Stanton.
28 *Temporary Partial Heart-Block Occurring as Sequel to Acute Pneumonia. A. L. Dykes.
29 Spinal Analgesia. J. W. H. Houghton.
30 Ovariotomy About Forty Years After Discharge of Fetal Bones Through Rectum; Recovery. J. D. Malcolm.
31 *Life Cycle of Organism of Syphilis. J. E. R. McDonagh.
32 Spasmodic Rhinorrhea Cured by Irrigation of Maxillary Antra, Which Were Infected by B. Coli. H. Whale.
33 Rupture of Lung in Labor. C. W. Cunnington.
34 Traumatic Dislocation of Both Hip-Joints. A. F. S. Sladden.

28. **Temporary Partial Heart-Block.**—In Dykes' case a temporary partial heart-block occurred as a sequel to acute pneumonia. The pulse was irregular for a period of three weeks, commencing to be so a week after the crisis. The irregularity was usually more marked in the evening, and appeared to give the patient no discomfort. Examination of the heart did not at any time reveal any physical signs of disease. The type of irregularity was fairly constant. The pauses never at any time appeared longer than would be accounted for by one missed beat, and, as a rule, one long beat would follow three, four, five or six shorter and regular ones. This state of matters continued till about four weeks after the crisis, when the pulse again became perfectly regular in rate and rhythm, and remained so while under observation during the following month.

31. **Life Cycle of Organism of Syphilis.**—It has been mooted for some time past that *Spirochaetae pallidae* had a resting stage. The resting stage was held responsible for the long incubation period of syphilis. McDonagh cut sections of chancres, lymphatic glands and various forms of syphilitic lesions, and examined films obtained from their juice, both *in vivo* by the borax methylene blue film-method andby fixed specimens. He paid most attention to the lymph-glands, as he thought the cycle was more likely to take place there than anywhere else; owing to the fact that, in spite of vigorous syphilitic treatment, the adenitis takes months to subside. He examined seventeen lymphatic glands, both before and after salvarsan; ten chancres in various stages from an early erosion to the slight induration left by a healed primary sore, and over twenty various skin lesions both before and after salvarsan. For controls he examined four lymphatic glands enlarged by gonorrhea, three enlarged by soft sores, three normal glands and various glands enlarged as a result of tuberculosis, lymphadenoma and malignant disease. Also five soft sores and skin lesions consisting of a plasmoma, or granuloma, viz.,

lupus, sporotrichosis, etc. In every instance in the syphilitic group, and in no instance in the control group, did he find any of the bodies described.

As these bodies were found exclusively in syphilitic tissue, he suggests that they may be phases in the cycle of the syphilitic organism. The commencement of the cycle is with a sporozoite or infective granule. By means of its progression, since it is motile (McDonagh thinks it has flagellae), the sporozoite reaches a large mononuclear cell and enters. It then becomes motionless, grows bigger, and develops a distinct mantle of protoplasm around itself. The development goes on within and at the expense of the protoplasm of the mononuclear cell, the nucleus of the cell always remaining intact. The degenerated protoplasm forms an envelope around the sporozoite, which has to be gradually increased in size according to the growth of the parasite. The sporozoite then divides. Each half forms a large non-granular staining mass. This mass, on the one hand, appears to become vacuolated and transformed into an irregular coil; and, on the other hand, to leave the cell and become extracellular. The coil later is found to be thicker in some parts than others, and the ends seem club-shaped. At the base of the coil, lying just above the nucleus of the cell but in the protoplasm of the mononuclear, are some rod-shaped bodies, which stain better than the strands of the coil. The coil, which now appears to be extra-cellular because the protoplasm of the mononuclear is so degenerated, becomes broken up into irregular, short wavy bodies. From these short, thick and wavy bodies the delicate, long and corkscrew-shaped body, the *Spirochaetae pallidae*, develops. This is the microgamete, or adult male gamete, which has no more necessity to divide than a spermatozoon. In some coils there appear to be circular masses, with spirochetes coming out of them.

The female development appears to be quite distinct from the male after a certain point. The other half of the sporozoite mentioned above, and which is now extracellular, becomes crescentic and then spherical. This spherical body is the perfect female or macrogamete and is now ready for fertilization. The act of fertilization McDonagh has never seen, but he thinks it is highly probable that the spherical body forms a "cone of reception," which is touched by the microgamete; the microgamete must then penetrate the macrogamete until its pronucleus reaches the female pronucleus. The forms met with in the next stage are rather difficult to distinguish from the macrogametocyte. A clear membrane appears over the whole surface of the zygote, and then the sporogony runs its course. The zygote divides into two and again into four; these four masses are the sporoblasts. Each sporoblast then becomes oval in form and goes on dividing to form numerous sporozoites, one of which starts the cycle again. This completes the spore stage, or sporogony. If this observation is correct the syphilitic parasite belongs to the order sporozoa and to the subclass telosporidia, since the spores are formed at the end of the cycle. An appropriate name for the syphilitic organism would be *Leukocytozoon syphilis*. The infection is probably conveyed by the sporozoite, or, as McDonagh calls it, the infective granule, and not by the *Spirochaetae pallidae*. The bodies visible in the sections are, he thinks, the sporoblasts and possibly the macrogametocytes. The reason he thinks some of the bodies are spores is because they persist in spite of treatment with salvarsan. Possibly the recurrent syphilids, meta- and para-syphilis, are due to the presence of these spores, which can *in loco* start a new life cycle.

Practitioner, London

October, LXXXIX, No. 4, pp. 445-588

35 Acute Intestinal Obstruction in Children. A. Edmunds.
36 Surgical Aspect of "Indigestion." H. W. Carson.
37 Clinical Aspects of Exophthalmic Goiter. R. O. Moon.
38 Law and Medicine, 1911-1912. W. A. Brend.
39 Recent Work in Anesthetics. J. Blumfeld.
40 Appendicitis in Children. S. F. S. Green.
41 *Acute Appendicitis in Children. H. E. S. Stiven.
42 Etiology, Diagnosis and Therapeutics of Appendicitis. F. C. Barlow-Eberhardt.
43 Appendicitis. J. D. Shapland.
44 Suggestive Medicine. I. G. Cobb.
45 *Why Voices Fail. C. Horsford.

41. Acute Appendicitis in Children.—Owing to their greater liability to a generalization of the infection, Stiven says, early operation is more imperative in children than in adults. The odds are three to two on this generalization of the infection arising; whereas, if they are operated on within twenty-four hours, the mortality, for this series at least, is nothing. A prolonged operation and undue exposure cause relatively greater risks. In the after-treatment, certain special arrangements will make all the difference between success and failure. The Fowler position, that is, the practice of raising the head of the bed from 2 to 3 feet off the ground, has contributed very greatly toward reducing the mortality in general peritoneal affections in adults, but it has done even more for children; this is truer still in the case of appendicitis. In order to compare the results, since this treatment has been adopted, Stiven has analyzed the mortality of the years 1904, 1905 and 1906, and 1908, 1909 and 1910. In children, the percentage mortality of the first three years is 38.4 per cent.; in the later years it is 29.3 per cent. In all appendix cases, it is 13.7 per cent., compared with 8.7 per cent. in the later years.

Of the cases in children, during the years 1904, 1905 and 1906, only four in which there was a gangrenous or perforated appendix and no localized abscess, recovered; in the later years, there were twenty-four such cases. Continuous instillation of saline per rectum is the rule in adults; in children, it is a complete failure. They do not retain salines given per rectum at all well, and, in the Fowler position, they retain less than when lying flat. Stiven has found it more satisfactory to give saline in small quantities, eight to ten ounces, per rectum, every four hours or, if possible, every two; children can retain this amount fairly well, provided it is given slowly with a catheter and funnel. It is easier, when given in this intermittent way, to be sure that the saline is injected warm; a most important matter, for any chill to a child is most dangerous. With adults, the rule for diet is starvation, with or without water, or albumin water. In children, this practice must not be followed, as they cannot bear starvation. Raisin tea, a decoction of crushed raisins, may be given with advantage; a feed of this, alternated with albumin water, will provide them with proteid and a carbohydrate (dextrose), which is absorbed directly unchanged. The bowels should be opened as soon as possible. In children, little difficulty is experienced, in contradistinction to adults, who are inclined to be obstinate. If a normal motion is not passed within twenty-four hours after the operation, a glycerine enema should be given, and syrup of senna used as the routine aperient. Complications are probably less frequent in children than in adults.

45. Why Voices Fail.—With all due respect to voice training as an art, and to the great skill frequently displayed by many gifted masters, Horsford says, the safe and effective training of the singer will be more certainly obtained by the cooperation of singing master and laryngologist. The latter will be able to advise in and guide over the numberless little ills which beset the path of the vocal student. He will be able to discover and treat latent abnormalities, which are unfavorable to the development of the voice. He can watch the effect of any special vocal treatment (by exercises) on any diseased condition. He may even be able to advise, in a doubtful case, in the classification of the voice from the type of throat under consideration. He will be able to explain to the teacher the physiologic processes at work in any given vocal phenomenon, and, therefore, favor the discovery of a cure on vocal lines.

Sei-I-Kwai Medical Journal, Tokyo

September, XXXI, No. 9, pp. 217-229

46 Acute Appendicitis. Y. Takaki.

Annales de Médecine et Chirurgie Infantiles, Paris

October 1, XVII, No. 19, pp. 577-608

47 *Initial Localization of Tuberculosis in the Lungs in Children and Adults. E. Rist.
48 Typhoid Spondylitis in a Boy of 10. Third Case Reported in France. Ardin-Delteil and Others.

47. Initial Localization of Pulmonary Tuberculosis.—Rist declares that the lower lobe of the lung is almost invariably the initial site of pulmonary tuberculosis in children; the apex is usually affected secondarily in both children and adults. Coughing forces air and septic material up into the apex, as can be seen by roentgenoscopy. The air expelled by the

cough spasm from the lower part of the lung is driven up into the apex. When roentgenoscopy fails to show that the apex clears up during coughing from the air being driven into it, the conclusion is evident that the apex has already lost its elasticity and hence is the seat of some permanent lesion.

Archives des Maladies de l'App. Digestif, Paris

September, VI, No. 9, pp. 481-540

49 *Gastric Adenomatous Polyposis. Devic and Bouchut.
50 Abscess of the Liver. (L'abcès du foie.) D. Glordano.
51 *Unusual Forms of Gastric Cancer. E. Rousseau. Commenced in No. 8.

49. Polyadenoma of the Stomach.—Devic and Bouchut found numerous polyps in the stomach of a man of 59 with aortic insufficiency who had succumbed to apoplexy. There was no tendency to malignant disease of the stomach in this case. The polyadenoma generally develops without causing symptoms, but chronic gastritis and cardiovascular disease were generally associated with it in the few cases of the kind on record.

51. Unusual Forms of Gastric Cancer.—The first part of this article was summarized on page 1578. Rousseau concludes it with a bibliography classified for the types with ascites, jaundice or liver or intestinal involvement.

Archives de Médecine des Enfants, Paris

October, XV, No. 10, pp. 721-800

52 *Fractures of Lower End of the Humerus in Children. A. Trèves.
53 *The Diet in Scarlet Fever. (Le régime dans la scarlatine.) M. de Biehler.
54 *Rumination in Children. J. Comby.

52. Fracture of the Humerus in Children.—Trèves discusses the features which are peculiar to children in these fracture cases. In his seventy-eight cases of fracture just above the condyle the final outcome was excellent in all but two cases. In forty-two cases of fracture of the external condyle, six of the children were left with more or less deformity although the outcome as regards functioning was not bad. Except when dislocation occurs and is overlooked, the prognosis of fracture of the epitrochlea is good. In three of his twenty-one cases of fracture of the epitrochlea an operation was necessary but the outcome was equally favorable in all but two of the twelve cases with dislocation. He gives case reports and some skiagrams of these various types as also of fracture of the lower end of the humerus, and discusses how to ward off deformity later. Lateral deviation consecutive to fracture of the elbow can always be traced to defective reduction and consecutive hypertrophy of the region involved. It seldom or never is due to actual bone growth. The power of spontaneous repair and the chance of ultimate functional adaptation are amazing in these fractures although massage and forcible mobilization of unreduced fractures will naturally aggravate conditions and entail actual deformity. The functioning of the joint should not be accepted as definitely compromised until two examinations at several months' interval show that there is no tendency to improvement. An early operation is not needed in such cases; time alone may restore normal conditions when reduction has been skilfully done.

53. The Diet in Scarlet Fever.—Biehler's experience seems to indicate that children with scarlet fever put on a milk diet escape nephritis most effectually (from 0 to 2.04 per cent. of forty-nine and twenty-seven children), while on a mixed diet without meat the proportion was 3.3 per cent. of twenty and eighty-one children. On a mixed diet with meat the proportion was 5.3 and 5.5 per cent. of ninety-three and eighteen children. The above groups represent respectively wage-earners and well-to-do families. The parents were all told to give as little salt as possible to the children. It seems logical that a diet which has a more or less irritating action on the kidneys would create a point of lesser resistance for the bacterial toxins. It is better to keep the child on milk alone for the first ten or fifteen days, or until the fever drops, and then give a mixed diet without meat, not allowing any until the end of the fourth week and after examination of the urine. Any tendency to albuminuria or nephritis indicates a return to the strict milk diet.

54. Rumination in Children.—Comby has encountered five cases of this kind; the children were between 2 and 4 years old. They did not seem to suffer from the anomaly, but it is better to break up the habit as soon as possible. Means to promote digestion and tone up the nervous system, persuasion and psychotherapy must be the main reliance.

Bulletin de l'Académie de Médecine, Paris

October 1, LXXVI, No. 32, pp. 427-452

55 *Curable Forms of Angina Pectoris. C. Fiessinger.
56 Principles of Hospital Construction. (Sur le projet de construction d'un nouvel hopital à Lyon.) E. Mosny and others. Commenced in previous volume.

55. Curable Forms of Angina Pectoris.—Fiessinger thinks that persons with attacks of angina pectoris are liable to live as long as others with heart disease if they take special care of themselves. In his experience with eighty patients whose history he has been able to trace for a number of years, he has found that the most serious cases are those with coronary disease, next in severity those with aortic or myocarditic disease; then follow the cases with angina pectoris in the course of mild chronic nephritis, and lastly those with angina pectoris as the effect of obesity or the swallowing of air. When the attack is brought on by physical exertion, then the myocardium is at fault, but on this myocardiac element is superposed a nervous factor, and the latter may be the work of toxic, infectious, reflex or simply emotional influences, and all these can be kept under control or corrected. The patient should be guarded against fatigue, worry and overexertion of any kind. The general treatment should consist in inhalation of amyl nitrite or exhibition of 3 or 4 drops of a 1 per cent. solution of trinitrin three times a day, and injection of 0.001 gm. morphin every three hours during a bad attack, with prolonged bed rest and small meals of a single dish every two hours—a total of seven meals a day. A glass of hot water should be taken after each meal, or a cup of cocoa. All patients benefit remarkably by this treatment; it fails only when the coronary disturbance is of syphilitic origin, in which case specific treatment is necessary; it cured completely four of his six patients in this class; none has had an attack for over six months, when before this they occurred almost daily. Angina pectoris in the young should always suggest syphilis. When the angina is due to aortic insufficiency, potassium iodid may benefit, keeping it up twenty days in each month. Bed rest for six or eight weeks may be necessary to reduce the irritability of the myocardium in these cases. The angina pectoris with myocarditis is frequently benefited to a remarkable extent by keeping in bed for a month, with very weak doses of digitalis and theobromin. Even in the elderly, this often arrests the tendency to angina pectoris when the myocardium is but slightly affected, while the innervation of the heart is peculiarly vulnerable. With interstitial nephritis, the patients sometimes cure their tendency to angina pectoris by some physical overexertion which dilates the auricle. In two cases of this kind, carrying a valise or running brought on for the first time a murmur of mitral insufficiency and they have had no angina pectoris since, although the nephritis and the high blood-pressure are still evident. In other cases a milk-vegetable diet, small frequent meals, frequent laxatives, and theobromin and digitalis ensured almost constantly marked improvement. The tendency to angina pectoris also subsides remarkably in the obese when they are kept on small frequent meals and theobromin for a month. Any person with angina pectoris who weighs above the standard for his age should have his weight reduced. The obese should guard especially against physical exertion; fatal syncope occurred from this cause in two of his twenty patients in this class. When a man under 45 has attacks of pain in the chest after walking or other exertion, and syphilis and aortic disease can be excluded, the trouble can generally be traced to distention of the stomach from swallowed air. With simple dyspepsia the angina pectoris has the feature of a neurosis, but with aerophagia the angina pectoris seems to be that characteristic of organic disease. The diaphragm pushed up by the swallowed air interferes with the action of the heart. It is possible for a person to die in apparently organic angina pectoris when in reality the trouble was from mechanical distention of the stomach. This

aerophagia should always be sought in examining a patient with angina pectoris. Small frequent meals, followed by sodium bicarbonate and absorbing powders are the measures indicated. Trinitrin and theobromin are useless and injurious in these cases, although we must not forget that association of the above types is possible. The results of the treatment outlined above are the more striking, he says, the older the patient. After 70, recovery is the rule. To ensure it, the patient must be kept under treatment more or less for fifteen months to three years.

Journal de Chirurgie, Paris

August, IX, No. 2, pp. 125-272

57 Osteoma of the Elbow. (Ostéomes de la région du coude.) G. Pascalis and C. Infroit.
58 Technic for Spinal Anesthesia. (Technique de l'anesthésie lombaire à la novocaine.) H. Chaput.

Journal de Médecine de Bordeaux

September 29, XLII, No. 39, pp. 613-628

59 *Experimental Research on General Anesthesia by Injection of Chloroform into the Peritoneum. G. Jeanneney.

59. Experimental Intraperitoneal Injection of Chloroform.—Jeanneney states that this method has no prospects either in surgery or physiology. The liver suffers more from the toxic action of the chloroform by this route, and also the kidneys. The injections seemed to be extremely painful, the parietal sheet of the peritoneum being peculiarly sensitive.

Lyon Médical, Lyons

September 29, XLIV, No. 39, pp. 505-552

60 *Nitrogen Output in Kidney Disease. (Le coefficient azoturique dans les affections rénales.) R. Boulud.

60. The Nitrogen Output in Kidney Disease.—By experimentation on dogs and healthy human beings, Boulud has determined that the nitrogen coefficient, that is, the relation of the urea to the total nitrogen, is normally 80 to 82 in both man and dog. He then induced nephritis in the dogs by the use of various agents, such as mercuric chlorid, chloroform and quinin, and there followed a marked decrease in this coefficient; it dropped sometimes as low as 60. In human subjects he found likewise a decrease in the nitrogen coefficient of patients with diseased kidneys, and in cases of albuminuria when the nitrogen coefficient was normal or high, some other reason for the albuminuria could always be found. He believes that the nitrogen coefficient is a valuable diagnostic and prognostic point in diseases of the kidney, and describes in detail his method of determining the urea, total nitrogen and ammonia in the urine.

Presse Médicale, Paris

October 5, XX, No. 81, pp. 809-820

61 Technic for Serotherapy of Tuberculosis. (Sur le mécanisme et la prévention des accidents de la sérothérapie antituberculeuse.) L. Bernard, R. Debré and R. Porak.
62 Diuretic Action of Digitalis. A. Martinet.
63 Mechanism of Pulmonary Emphysema. Malibran.

Revue Médicale de la Suisse Romande, Geneva

September, XXXII, No. 9, pp. 613-664

64 *Primary Tuberculosis of the Conjunctiva. E. M. Serebroff.
65 *Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis; Twenty-Three Cases. Jaquerod.

64. Primary Tuberculosis of the Conjunctiva.—Serebroff thinks that this affection is more common than is generally recognized, and that the prognosis under proper treatment is less serious than according to the reputation it has hitherto borne. The ulcerative forms with a rapidly destructive tendency are the gravest. General measures to tone up the system and stimulate the vitality of the tissues are indispensable, supplemented by excision and cauterization of the tissues left beneath in the cases that permit radical removal of the lesion.

65. Artificial Pneumothorax.—Pleural adhesions prevented effectual compression of the lung in eight of the twenty-three cases in which Jaquerod tried to apply therapeutic pneumothorax. The untreated patients have died since, while a number of those with the artificial pneumothorax are practically cured and all were improved. Two are clinically cured of the five with febrile tuberculosis and a destructive process in one lung, and all of four afebrile patients with unilateral cavities, and one with acute pleural tuberculosis. A tendency to recurring severe hemoptysis was immediately arrested by the pneumothorax in two cases, although the compression was not complete in one. One patient was a young woman with occasional moderate hemoptysis, bronchiectasia and much expectoration. The temperature was slightly above normal and the patient was running down although no tubercle bacilli could be found in the sputum; a remarkable turn for the better followed injection of from 100 to 250 c.c. of nitrogen at a sitting, repeating this about once a week for two months. This did not compress the lung completely but still enough to cause the healing of a cavity and put an end to the expectoration. On one occasion the injection was followed by transient almost total blindness for fifteen minutes. He has never observed by-effects of any kind in any other case, and he ascribes the reflex disturbances in this instance to the fact that this was the only case in which he ever introduced the gas under pressure.

Révue Mens. de Gynécologie, d'Obstétrique et de Pédiatrie, Paris

September, VII, No. 9, pp. 513-552

66 *Vaginal Hysterectomy for Fibroma. S. Pozzi.
67 Instrumental Demonstration of Pulse in Apparent Death. (Mort apparente d'un nouveau-né en période agonique; persistance de la circulation démontrée par l'oscillomètre de Pachon.) P. Balard.

66. Vaginal Hysterectomy for Uterine Fibromas.—Pozzi discusses the indications and technic, remarking that the vaginal route is contra-indicated if there is a suspicion of appendicitis or disease in the uterine adnexa. On the other hand, general anesthesia during a vaginal operation seems to be freer from accidents—other things being equal—than in abdominal operations, the operative shock being so much less.

Revue Prat. d'Obstétrique et de Gynécologie, Paris

September, XX, No. 9, pp. 257-284

68 *Lactic Acid Bacilli in Local Application. (La bactériothérapie lactique en obstétrique et gynécologie.) L. Pouliot.
69 Tuberculosis Complicating Pregnancy. (Conduite à tenir dans les cas de tuberculose compliquant la grossesse.) M. Brindeau.
70 Post-Mortem Delivery. J. Péry.

68. Lactic Acid Bacilli in Local Treatment.—Pouliot observes that the vogue of lactic acid bacilli in treatment and prophylaxis of intestinal troubles seems to be waning. This method of internal treatment long continued is said to lead to demineralization of the organism and hence to invite tuberculosis. On the other hand, lactic acid bacilli in local application seems to be acquiring more and more of a footing in gynecology and obstetrics. The Bulgarian bacillus produces the largest amounts of lactic acid; other strains average only 10 gm. to the liter of milk while the Bulgarian strain produces up to 32 gm. In local applications they rapidly clear off gangrenous and ulcerative patches and healing proceeds smoothly. Pouliot regards the method as having a wide field of effectual action in accessible gynecologic and obstetric lesions.

Semaine Médicale, Paris

October 2, XXXII, No. 40, pp. 469-480

71 Roentgentherapy of Uterine Myomas. R. de Bovis.

Archiv für klinische Chirurgie, Berlin

XCIX, No. 2, pp. 307-595. Last indexed Oct. 12, p. 1410

72 Primary Cancer of Small Intestine. (Ueber den primären Dündarmkrebs.) R. Hinz.
73 Transformation of Bladder Papilloma into Sarcoma. (Zur Frage der Mutation von Harnblasenpapillomen in Sarkom.) S. G. Lenenberger.
74 *Recovery After Opening Up Fourth Ventricle; Four Cases. (Breite Freilegung der Hirnventrikel, namentlich des vierten.) F. Krause.
75 Omentum Flap to Arrest Hemorrhage During Cholecystectomy. (Verwendung der freien Netzverpflanzung als blutstillendes Mittel bei der Gallenblasenexstirpation.) L. Stuckey.
76 *Operative Treatment of Ulcerative Colitis. H. Lindenberg.
77 Gastric Ulcer and Gastro-Enterostomy. A. Kocher.
78 *Chronic Duodenal Ulcer and Its Operative Treatment. (Chronische Duodenalgeschwür und seine chirurgische Behandlung.) A. Blad.
79 The Popliteal Artery in Relation to Aneurysm, Etc. (Lageveränderung der Arteria poplitea bei Flexion und Extension des Unterschenkels.) N. D. Buschmakin.
80 *Circumscribed Serous Cerebral Meningitis. W. Wendel.
81 Operative Treatment of Gastric Ulcer. (Chirurgische Behandlung des Magengeschwüres.) F. v. Fink.

82 Operative Treatment of Nephritis. (Intrarenale Drucksteigerung und chirurgische Behandlung der Nephritis.) M. Zondek.
83 Aseptic Destructive Processes in Bone and Cartilage. (Ueber einfache, aseptische Knochen- und Knorpelnekrose, Chondritis dissecans und Arthritis deformans.) G. Axhausen.
84 Recurring Malignant Chordoma of Sacrococcygeal Region. A. Vecchi.
85 Operation for Umbilical or Median Line Hernias. (Radicaloperation der Hernien des Nabels und der Linea alba.) G. A. Waljaschko.

74. **Opening Up the Ventricles of the Brain.**—In two of Krause's four cases the lateral ventricle and in two the fourth ventricle was opened up. All the patients recovered. The first two were children with hemiplegia for which difficult delivery was evidently responsible as unilateral convulsions had followed, gradually yielding to paralysis of the cerebral spastic type followed by Jacksonian epilepsy, and the mind had evidently suffered. At the ages of 7 and 10 Krause turned back a flap in the dura and found a large cyst in each case. After removal of the cyst wall he covered the ventricle with flaps from the dura, and there has been no recurrence of the epilepsy and the children have regained considerable use of their limbs. In the other cases the cyst or tumor was in communication with the fourth ventricle and cerebellum; the patients recovered after its removal although the centers for respiration and pulse had been exposed during the operation. One of these patients was a woman of 30.

76. **Operative Treatment of Ulcerative Colitis.**—In the first of the two cases reported Lindenberg opened the colon and eventrated its mucosa, suturing to the skin the edges of the split bowel and keeping it open this way for three months, with complete final recovery. The open gut acted like a large artificial anus and was washed out with a watering pot as the patient lay on a large basin, and this kept conditions bearable. But the complete recovery after the intestine was sutured and reduced repaid a thousandfold for the three months' discomfort. The colitis was of nine months' standing in this case but no specific germs for it could be found. In the other case the colitis was acute and was found so extensive at the operation that the intended anastomosis had to be abandoned and the young man died the next day. Nehrkorn has reported eight cured among eleven patients treated by a left artificial anus, while only seven were cured of the sixteen treated by a right anus. Seven were cured of the twelve patients treated with a cecal anus.

78. **Chronic Duodenal Ulcer.**—Blad remarks that duodenal ulcer is being found oftener now that it is more systematically sought for. An early operation is the only means for a permanent cure. Chyme may pass out of the pylorus even with a functioning gastro-enterostomy.

80. **Serous Meningitis.**—Wendel describes a case of circumscribed serous meningitis which developed inside the skull of a young man from an infectious process in the orbit, after the orbital process had healed. The symptoms and treatment are the same as with a brain tumor, but the process in itself is sterile, being merely the result of obstruction of lymph passages.

Beiträge zur klinischen Chirurgie, Tübingen

LXXVII, No. 3, pp. 691-780

86 *Exophthalmic Goiter a Surgical Affection. (Die Basedowsche Krankheit. Eine chirurgisch-experimentelle und biologische Studie.) H. Klose, A. E. Lampé and A. E. Liesegang.

86. **Hyperthyroidism.**—Klose and his coworkers present 181 pages of evidence of various kinds to establish beyond question that exophthalmic goiter is a surgical affection and that the cause of the trouble is not an excess of normal thyroid secretion but that the secretion is abnormal and toxic. Operative treatment has given from 75 to 85 per cent. permanent cures, while the operative mortality has dropped to 3 per cent. in general—zero in the incipient cases while still high in the severer forms. All of which, they declare, testifies to the importance and efficacy of early operative treatment. The red cells do not seem to be affected in hyperthyroidism, but the constant, relative or absolute lymphocytosis, involving both large and small lymphocytes, is of great differential value and a guide to treatment. The blood with hyperthyroidism is also slow in coagulating and the freezing point is low.

Beiträge zur Klinik der Tuberkulose, Würzburg

XXIV, No. 3, pp. 283-410. Last indexed November 2

87 *Unilateral Pulmonary Tuberculosis Spreading from Hilus. (Einseitige vom Hilus ausgehende Lungentuberkulose.) H. Straub and M. Otten.
88 *Pulmonary and Tracheobronchial Syphilis. H. Lindvall and J. Tilgren.
89 *Complications Liable in Treatment with Artificial Pneumothorax. A. Weiss.
90 Lymphogranulomatosis. (Ueber Befunde bei Morbus Hodgkin mittelst der Antiforminmethode.) H. Löffelmann.
91 Gases in Blood with Disease of Air Passages and Lungs. (Experimentelle Studien über das Verhalten der Blutgase bei Erkrankungen der Lunge und der luftführenden Wege.) E. Lippert.
92 The Movement in Germany for Public Sanatoriums for the Tuberculous. A. Brecke.

87. **Pulmonary Tuberculosis Starting in the Hilus.**—Straub gives the details of twenty-seven cases with several illustrations to show the differential points between pulmonary tuberculosis commencing at the apex or in the hilus. Those of the latter type are especially amenable to artificial pneumothorax. He advocates it in all cases of advanced tuberculosis starting in the hilus and restricted to one lung or with only slight involvement of the other, with a process having shown some tendency to repair although the general trend is progressive. The left upper lobe is the one generally involved in this type.

88. **Pulmonary Syphilis.**—Lindvall and Tilgren give the details of the clinical course and necropsy findings in two cases, the patients men of 35 and 36. In the first case the process proved fatal in a year. Chronic nephritis developed and other symptoms of amyloid degeneration of the viscera. Universal lymphadenitis suggested at first a tuberculous affection, but the findings in the lung were not those of advanced tuberculosis and no tubercle bacilli were found in the sputum. In the other case tertiary symptoms developed eleven years after infection but only a little potassium iodid was taken. Two years later the "carnification" lesions in the pharynx and lungs became evident, but they showed no special characteristics of syphilis under the microscope.

89. **Complications of Artificial Pneumothorax.**—Weiss remarks that it is amazing what a favorable influence can be exerted on a pulmonary process by injection of even a small amount of the gas. Gas embolism is a bad complication; Brauer has reported four cases in which it occurred and Weiss has had it once, but his patient recovered. The needle had evidently pierced a blood-vessel as the patient was told to breathe deep in ascertaining whether the puncture needle was in the right place. The emphysema which may be observed is more annoying than dangerous; effusions may require removal eventually, but should be treated expectantly for a time. He never tapped the effusion when staphylococci were involved. He aims to puncture deep to release as much fluid as possible and then inject nitrogen to take its place. In his experience active foci in the other lung were never benefited by the pneumothorax therapy, and he regards them as a contra-indication. In one case the pneumothorax was applied to arrest hemoptysis, and the patient seems in the best of health now, the bacilli having long disappeared from the sputum. Compression of the diseased lung evidently floods the blood with toxins so that reactions are induced as with tuberculin. In one case a man with a destructive process in the upper lobe and scattered foci elsewhere in the lung was treated by the artificial pneumothorax, but the gas spread into the pleura on the other side, evidently from a tear in the mediastinum, thus compressing both lungs, and the gas had to be released. The tear must have healed soon, as in three weeks the procedure could be repeated without further trouble. Weiss insists that the indications for the pneumothorax treatment should not be extended and that it is better to refrain from sacrificing too much healthy lung tissue. One of the great advantages of the procedure is the improvement in the patient's state of mind. One danger from it is in case of pneumonia in the other lung; he had a case of this kind and the patient died notwithstanding that the nitrogen was withdrawn.

Berliner klinische Wochenschrift

September 30, XLIX, No. 40, pp. 1873-1920

93 *Pathogenesis of Orthostatic Albuminuria. B. Stiller.
94 *High Blood-Pressure and Sugar Content of the Blood. (Hypertension und Blutzucker.) M. Hagelberg.

95 *The Blood-Findings in the Obese. (Blutbefunde bei Adiposi-tas.) L. Caro.
96 Hysteria as a Product of Civilization. O. Aronsohn.
97 *Atropin Poisoning; Two Cases; One Fatal. R. Wolter.
98 Advantages of the Phenolsulphonephthalein Test of Kidney Functioning. F. Fromme and C. Rubner.
99 *Experimental Research on Influencing of Sexual System by Operations on Nose. Koblanck and H. Roeder.
100 *Attempted Abortion with Extra-Uterine Pregnancy. (Frucht-abtreibungsversuche bei extrauterinem Sitz der Schwanger-schaft.) M. Hirsch.
101 Gonococcus Vaccine in Diagnosis. H. Ziemann.
102 Prognosis of Melancholia. W. H. Becker.
103 *Epidemic of Seborrheic Eczema. C. Bruhns and M. Cohn.

October 7, No. 41, pp. 1921-1968

104 Research on Hemoglobinuria. J. W. Miller.
105 The Streptococci in Tonsillar Infection. (Zur Bedeutung der hämolytischen und anhämolytischen Streptokokken für die Pathologie der Tonsillen.) F. Henke and H. Reiter.
106 Dilatation of the Esophagus. (2 Fälle von diffuser Ektasie der Speiseröhre.) Ratkowski.
107 Preparation of Eye for Removal of Cataract. (Zur Vorberei-tung des Auges für die Staroperation.) T. Treitel.
108 *Dry Heat and Boiling Water in Treatment of Chronic Skin Disease. (Die strahlende Wärme und das siedende Wasser im Dienste der Behandlung von Hautkrankheiten.) J. Toth.
109 Research on the Wassermann Reaction. (Beeinflussung der Wassermannschen Reaktion durch Schwankungen des Kom-plements.) J. Trinchese. (Verlauf nach der Salvarsan-injektion.) K. Shiga.
110 *Aseptic Catheterization. R. Roosen.

93. **Orthostatic Albuminuria and Congenital General Asthenia.**—Stiller claims that the phenomenon observed by Jehle, namely, that induced lordosis is liable to cause albuminuria in previously healthy children, is a manifestation of the universal asthenia to which Stiller long ago called attention. This asthenia is the basis on which the orthostatic albuminuria develops, as also the narrowing of the upper aperture of the chest—all are the consequences of the general asthenia characterized by the tendency to sagging of the viscera, nervous dyspepsia, neurasthenia of both the volitional and vegetative nervous systems, motor, sensory and secretory disturbances of the stomach, splashing sound, etc. The constitutional inferiority is responsible for the development of the albuminuria on slight causes.

94. **High Blood-Pressure and Sugar Content of the Blood.**—Hagelberg found abnormally high sugar content in the blood in twenty-six cases of nephritis or arteriosclerosis or both combined. At the same time the proportion was within normal range in his six cases of arteriosclerotic contracted kidney. The data presented suggest that an abnormal increase in the proportion of epinephrin is the primal cause for the high blood-pressure and also for the high sugar content. This assumption harmonizes with the results of recent research in other lines.

95. **The Blood-Findings with Obesity.**—Caro gives the minute details of the blood-findings in thirty-four cases of obesity, constitutional or acquired. Relative lymphocytosis was evident in all with reduction of neutrophil granulated leukocytes. Under thyroid treatment the blood-picture improved. He also found relative lymphocytosis in the majority of thirty-three diabetics; the eosinophils were increased in 25 per cent. of the cases. Kocher's finding of relative lymphocytosis in 155 persons with myxedema or cretinoid symptoms showing deficient typhoid functioning, is important as myxedema so often is accompanied by obesity. Guggenheimer has also found much lymphocytosis in a case of eunuchoid giant growth and two of eunuchoid obesity.

97. **Atropin Poisoning.**—The man of 52 became unconscious soon after taking a mouthful of a liquor labeled "anisette," and chemical examination later showed that he must have taken 3.2 gm. of atropin sulphate. The maximal dose is given as 0.003 gm. The man died after twenty-seven hours. The jaws were locked with a tonic cramp, the temperature ran up to 42 C., the pupils were dilated to the maximum, and the knee-jerk was lively. Another man who had tasted two drops of the liquor recovered after a period of delirium and tonic spasm of the jaws. Under chloroform the mouth was opened enough to introduce the stomach pump and the stomach was thoroughly rinsed out and milk poured in. Consciousness returned the next morning, the pulse dropped to 104 and complete recovery soon followed.

99. **Experimental Influencing of the Sexual System by Operations on the Nose.**—Koblanck and Roeder state that the operation on the nose to destroy the so-called genital points seemed to have no influence on the development of the animals. They grew as well as the controls, except that the total weight was a trifle less, but when the animals were killed the genital organs were found practically rudimentary in the treated animals and while the untreated animals had two litters, the treated animals seem sexually indifferent. It is probable that there is some intimate connection with the hypophysis, and there may be some nervous stimulus from the points in the nose causing the hypoplasia of the genital organs.

100. **Attempted Abortion with Extra-Uterine Pregnancy.**—Hirsch reports four cases in which injury from attempted abortion complicated the extra-uterine pregnancy. Differentiation in such cases is difficult but was possible in these cases as the pains in the side recurred more and more frequently, while the tumor became less tender under rest in bed, ice and morphin, while the temperature dropped and the general condition improved. With pyosalpinx, the objective and subjective phenomena generally subside parallel under bed rest. The recurrence of the attacks of pain, notwithstanding appropriate expectant treatment, suggests extra-uterine pregnancy even when preceding criminal manipulations may have obscured the picture.

103. **Epidemic Seborrheic Eczema.**—Bruhns and Cohn found twenty-nine girls, in a room with thirty-five, presenting seborrheic eczema; the children were between 11 and 14 and the foci were in the face. The course was tedious owing to the tendency to recurrence. In the other school rooms there were only a few isolated cases.

108. **Heat in Treatment of Chronic Eczema.**—Toth has the patient hold the part affected in the heat from an oven or other source at a temperature of 100 or 115 C. (212 or 239 F.) passing the part gently back and forth five or six times until the prickling from the heat has stopped, doing this two or three times and repeating it three times a day at first. The part should be held closer to the source of the heat each time, and the patients do this instinctively when they feel the relief from itching and the benefit generally from the process. After the dry exposure a folded towel is dipped in boiling water and laid gently on the part and moved to and fro, applying this with more force each time. Patience and perseverance were necessary to conquer the old chronic eczema in the case reported, Toth himself being the victim, but permanent success finally crowned his efforts after a number of relapses. The cleanliness, simplicity and self-regulating features of the method and its prompt relief of the distressing symptoms are the special advantages of this combination of heat and boiling water. The only drawback is its tediousness. In his case the eczema previously kept constantly recurring and extended from the top of the head to the toes.

110. **Aseptic Catheterization.**—Roosen has not yet tried in the clinic the catheter cover of which he gives an illustration, but he thinks that theoretically it will effectually protect against carrying infection upward into the bladder. A long narrow case, like an umbrella case, fits inside the metal catheter; the end projecting from the tip is fastened to a ring. As the catheter is introduced the ring catches at the mouth of the urethra and as the catheter is pushed farther in the case is drawn out of the tip and turned over backward, thus forming an aseptic covering for the tip and entire length of the catheter in the urethra. When the catheter is to be withdrawn, the case is pulled back inside it by a thread fastened to the smaller end of the case, inside the catheter. The walls of the catheter thus do not come in contact at any point with the walls of the urethra.

Deutsche medizinische Wochenschrift, Berlin

October 3, XXXVIII, No. 40, pp. 1865-1912

111 Acute Circulatory Weakness. (Behandlung der akuten Kreis-laufschwäche, insbes. bei akuten Infektionskrankheiten.) A. Hoffmann.
112 Renal Glycosuria in Pregnancy. (Nierendiabetes in der Gravi-dität.) J. Novak and others.
113 Relations Between Internal Secretions and Diabetes Insipidus. O. Steiger.
114 Technic for Determining of Resisting Capacity of Red Cor-puscles. (Fehlerquellen bei Bestimmung der Resistenz der Erythrozyten nach v. Liebermann und v. Fillinger.) E. Schaeffer.

115 *Typhoid Bacillus Carriers. (Zur Bedeutung der Typhusbazillen-Dauerausscheider. Schroeter.
116 Idiopathic Osteopsathyrosis. J. Lewy.
117 Blocking the Brachial Plexus. D. Kulenkampff.
118 Transverse Tracheotomy. P. Rohmer.
119 Liver Utilized to Close Defect in Diaphragm. J. Jankowski.
120 Epidemic Poliomyelitis. (Die spinale Kinderlähmung.) C. Deutschländer.
121 Frozen Meats. (Das Gefrierfleisch.) A. Schmidt.

115. **Typhoid Bacillus Carriers.**—A small epidemic in a country village was finally traced after much effort to a woman who had had typhoid thirty-two years before. The cases of typhoid occurred at long intervals, a year or more. This is explained possibly by the fact that the carrier had comparatively few typhoid bacilli and expelled them only at considerable intervals.

Deutsche Zeitschrift für Chirurgie, Leipsic

September, CXIX, Nos. 1-2, pp. 1-200

122 *Common Bile Duct Made from Drain Tube. R. Brandt.
123 Encapsulated Helminth Ova in Pancreas. (Fremdkörpertuberkel des Pankreas verursacht durch eingewanderter Askariseier.) S. Muroya.
124 Improved Technic for Suturing Vessels of Small Caliber. N. A. Dobrowalskaja.
125 Surgery of Deep Lymph-Nodes in the Pelvis. (Zur Chirurgie der tiefen Beckendrüsen.) O. H. Kotzulla.
126 *Convulsions in Connection with Operations on the Pleura. (Auftreten von Krampfanfällen bei Eingriffen an der Pleura.) D. G. Zesas.
127 Cause of Abdominal Phenomena in Pneumonia. (Lymphgefässe der Lunge.) K. Franke.
128 Malignant Degeneration of Leukoplakia of the Penis. K. Iwasaki.
129 Goring Injury of Abdomen. (Bauchdeckenverletzung durch Hornstich.) Creite.

122. **Artificial Common Bile Duct.**—Brandt reports six cases in which Wilms supplied the place of the missing common bile duct with a rubber drain tube. The measure proved very useful and harmless, but the cases teach that the tube must not project far into the lumen of the intestines and that the tube should be wrapped its entire length in omentum to ensure the best results. The gall-bladder was removed in each case. The ultimate outcome to date, after more than a year, is perfect. The tube was expelled through the wound the twelfth day or vomited up later in three cases, but the interval had been long enough for an adequate outlet for the bile to develop and there has been no trouble since. In all the cases the measure undoubtedly saved the lives of the patients who had been gradually succumbing to their bile fistula or sepsis.

126. **Prophylaxis of Convulsions in Connection with Operations on the Pleura.**—Zesas has encountered a case of this kind, the convulsions following fifteen minutes after puncture and aspiration of about 150 gm. of pleural effusion in a case of primary cancer of the lung on this side. He has found records of fifty-three similar cases, all but sixteen in men. In forty-five cases the convulsions followed immediately on the intervention on the pleura; in the others not until several minutes or hours later. In three cases the convulsions recurred spontaneously a few times. In eight cases the convulsions followed a simple puncture. In two cases an operation for empyema was done under general anesthesia and the patients—boys of 9 and 10—died suddenly, whether from reflex action starting in the pleura or a chloroform accident is open to question. It seems advisable, however, to reduce reflex excitability in the pleura in prophylaxis of disturbance from this cause. Zesas regards this as particularly necessary for very nervous patients. A preliminary injection of morphin seems the best means for the purpose, according to the results of experiments on animals. In his personal case a prompt injection of morphin put an end to the convulsive twitchings in arms and legs and restored the patient to consciousness. He had no remembrance of the attack.

Medizinische Klinik, Berlin

October 6, VIII, No. 40, pp. 1611-1650

130 *Calculi in Kidney or Ureter. (Nieren- und Uretersteine.) L. Casper.
131 *Modern Diagnostic Measures from Standpoint of Life Insurance. (Verwertung diagnostischer Fortschritte in versicherungsärztlicher Hinsicht.) J. Flesch.
132 Prophylaxis of Diphtheria. M. Neisser.
133 Jaundice in Children. (Icterus simplex und seine Behandlung beim Kinde.) A. Niemann.
134 Local Variations in Blood-Pressure. (Verlauf der Druckschwankungen in den Hohlräumen des Herzens und in den grossen Gefässen.) H. Piper.

130. **Kidney and Ureter Calculi.**—Casper declares that it is possible now to diagnose a stone in the upper urinary apparatus in almost every case and in an early stage. He has encountered many cases in which there was not the slightest pain or hemorrhage, and other affections may induce pain from obstruction of the outlet, or hemorrhage or both, and a dull continuous pain may accompany tumors, renal tuberculosis or nephritis. But hemorrhage connected with physical exercise and effort is scarcely ever observed except with stones. Palpation is unreliable but roentgenoscopy seldom fails to disclose stones in the kidney, pelvis or ureter. The only exceptions are small urate stones and sometimes the oxalate stones, but Casper has always detected oxalate stones larger than a pea. He warns against the errors liable in the roentgen-ray pictures with calcified glands and lumps of feces; repeated changes of position and repetition after an interval will generally clear up the case; a catheter in the ureter will cast a shadow superposed on the stone, while there will be a space between with most other objects liable to be confounded with a ureter stone. Negative roentgenoscopy is not absolutely conclusive. Kidney stones sometimes induce reflex colic in the other kidney, and ureter stones may induce the same symptoms as a stone in the kidney. Treatment should aim to relieve the pain and hemorrhage, get rid of the stones and prevent further stone formation. If the patient keeps quiet or stays in bed there is generally no further hemorrhage. If the bleeding is excessive, operative measures are the only resource. A constant dull pain may get transient relief from mild narcotics but glycerin is more effective. He gives a tablespoonful every three hours up to 150 c.c., with a little tincture of bitter orange peel and tincture of gentian to prevent nausea. Some have reported hemoglobinuria, but he has never seen any by-effects except occasionally slight diarrhea. Kidney colic is treated with heat, copious drinking to promote diuresis, and an injection of morphin to combat the contractions of the ureter. Rest in bed and a milk diet is indispensable in the days following the attack of colic; the urine generally shows some albumin at this time, testifying to some slight superficial injury from the stone. To get rid of the stones without an operation, stimulate diuresis by fluids, possibly up to 8 liters a day. If the stones are low down in the ureter, it may be possible to help their expulsion by injection of oil or glycerin around and behind the stone. If the calculus causes no disturbance except colic, at intervals of years, when the urine is limpid and aseptic and the patient suffers only very rarely, operative treatment is not needed. Recurrence is frequent, and consequently the diet should be regulated to counteract this, refraining from meat and internal organs. With oxalate stones, spinach, apples and tomatoes had better be avoided. The larger the amount of urine the more the salts in it are diluted, and the more readily sand is washed out; the kind of food is of less importance.

131. **Modern Diagnostic Methods in Examination for Life Insurance.**—Among the points emphasized by Flesch are the necessity for direct visual inspection of the sigmoid flexure in case of unexplained blood in the stools, also that when the skin is purplish, without a tendency to arteriosclerosis or apoplexy, a drop of blood from the finger should be examined to see whether the patient may not have polycythemia. This brings danger of thrombosis, hemorrhages and albuminuria; the spleen may be enlarged, the blood-pressure high and the hemoglobin 90 or up to 110 per cent. In differentiation of nervous cardiovascular disturbances, he mentions that arhythmia from organic heart trouble is not affected or becomes aggravated by muscular exercise, while nervous extrasystoles are more apt to subside when the individual kneels down several times in succession or pressure is applied to the vagus, or 0.001 gm. atropin injected. Tachycardia of nervous origin can be transformed into bradycardia by injection of physostigmin. Tachycardia from thyroid intoxication is characterized by the pulsation of the large vessels and the tendency to rapid exhaustion; the thyroid may not be enlarged but the blood-pressure is generally low and there is great susceptibility to epinephrin. Flesch remarks that he has found emphysematous bronchial catarrh and asthma an occupational affection in persons working on hides and furs. He warns that amenorrhea before the

menopause should suggest the possibility of some lesion in the hypophysis. If there are other indications of genital dystrophy, such as obesity, pallor, etc., the base of the skull should be examined by roentgenoscopy. He has found the galvanic light reflex (Bumke) and the secondary light reaction (Weiler) useful in disclosing nervous affections for which syphilis is responsible. Both of these reactions disappear on an average in 84 per cent. of the cases before the reflex ocular palsies develop. In diagnosis of pulmonary disease roentgenoscopy is comparatively of little use, but for the gastro-intestinal tract it affords decisive testimony. Serodiagnosis of syphilis is useful on suspicion of a parasyphilitic affection; signs of neurasthenia or of a tendency to neurotic degeneration with a history of old syphilis are always suspicious of a tendency to tabes or progressive paralysis, and a positive Wassermann reaction should exclude the candidate. A negative Wassermann test and a long interval of health without specific treatment may be regarded as testifying to a thorough cure. Flesch adds that the consensus of opinion to date is that salvarsan treatment alone never cures syphilis; the most reliable treatment is early excision of the primary sore and a combined mercury-salvarsan treatment. He regards alimentary galactosuria as identical with insufficiency of the liver. At the same time, he warns that galactosuria may occasionally be found with the liver intact, but in this case there is always accompanying dextrosuria, and these rare findings do not annul the great importance of the alimentary galactosuria test for insurance. Urobilinogen in the urine points to stagnation in the portal circulation. This is particularly liable when the right heart is overburdened from chronic mitral stenosis, chronic emphysema, weakness of the heart muscle, dilatation or with asthma. The urobilinogen is readily detected in the urine by Ehrlich's aldehyd reaction; the reaction ceases as compensation is restored. To distinguish between pentosuria and diabetes, it must be remembered that pentosuria should be suspected when the Trommer test is positive only as the fluid cools, and then by fits and starts. Milk sugar is usually found in the urine of parturients up to the sixth week, especially when they are not nursing, and this gives all the tests for sugar except the fermentation test. He discusses in conclusion chondroitic aciduria (see abstract 85, p. 1330), and commends May's tungstic acid method for clearing up urine before testing for sugar.

Münchener medizinische Wochenschrift

October 1, LIX, No. 40, pp. 2145-2208

135 Transperitoneal Cervical Cesarean Section; Thirty-Three Cases. M. Henkel.
136 Myeloblast Chloroleukemia with Aplastic Hyperchromic Anemia in Boy of 8. J. H. Esser.
137 *Wholesale Poisoning from Baked Fish. (Zur Frage der Fleischvergifter.) G. Mayer.
138 *Roentgenoscopy of Constipation. (Ueber hypokinetische und dyskinetische Formen der Obstipation.) G. Schwarz.
139 Traumatic Organic Mental and Nervous Disease. (Organische Geistes- und Nervenkrankheiten nach Unfall.) F. Eichelberg.
140 Harmlessness of Potassium Chlorate in Tooth Pastes. (Ist der Gebrauch der Kalichloricum-Zahnpasten gefährlich?) C. Bachem.
141 Roentgenoscopy in Diagnosis of Hernia of the Diaphragm. E. Scheidemandel.
142 Drug Eruption Under Pantopon. E. Klausner.
143 *Hemophilia Cured by Injection of Defibrinated Blood from Patient's Daughter. H. Rubin.
144 Moving Pictures in Study of Tropical Diseases. G. Olpp.
145 *Nerve Relapses of Syphilis After Salvarsan. (Häufigkeit und Hochgradigkeit der Neurorezidiven nach Salvarsan.) Benario.

137. **Meat Poisoning.**—In the epidemic reported by Mayer the proteus was found in the stools in large numbers but they were soon supplanted by paratyphoid bacteria. If the examination had been postponed a few days, the latter alone would have been found. His experience has been that paratyphoid bacteria are not contagious; in order to have pathogenic importance they have to proliferate in food in which they can generate their toxins.

138. **Constipation.**—Schwarz gives illustrations showing two special types of constipation. In one the feces do not separate into lumps, as in normal conditions, and the colon is seen on roentgenoscopy to be abnormally long. He calls this the hypokinetic type. In the other group the anomaly is the other extreme; the feces are separated into innumerable small lumps and the excessive motor functioning of the colon forces the feces at times backward. He calls this type the dyskinetic with hypersegmentation or hyperrepulsion. One patient was a woman of 50, who for years had been extremely constipated, the bowels not moving at times for eight days; twenty-four hours after the meal the feces still form a solid band in the cecum and ascending colon. In this type the reduction of the motor functioning is most pronounced in the colon.

143. **Injection of Defibrinated Blood in Hemophilia.**—Rubin reports the case of a woman of 50 with a hemorrhagic diathesis and excessive climacteric hemorrhages and extravasation of blood. The general condition was growing rapidly worse when Rubin injected 40 c.c. of defibrinated blood from the patient's daughter. The hemorrhages stopped the same day and there has been no manifestation of the tendency since. Two more intramuscular injections were made to confirm the cure. The rapidity with which the hematomas were absorbed was most striking. This experience suggests that injection of defibrinated blood might prove useful in various gynecologic affections accompanied by much loss of blood. See editorial, p. 1549.

145. **Nerve Relapses After Salvarsan.**—Benario writes from Ehrlich's institute at Frankfort to review the literature on this subject. He agrees with Ehrlich that the nerve relapses are the manifestation of a monorecurrence at a point inaccessible to the medication. The virulence of the local recurrence after salvarsan is due to the lack of all competition. The origin and development of a nerve relapse depends on one hand, he says, on the preceding treatment and the time the process has had to develop—every day of postponement of vigorous treatment reduces the prospect for complete restitution. Not the severity of the case should be accepted as the criterion for mercury or salvarsan treatment—the question is whether it is possible to put through a vigorous course of salvarsan treatment. Unless the patient is able and willing to take the two or three weeks' intensive course, it is better to refrain from salvarsan altogether.

St. Petersburger medizinische Zeitschrift

September 28, XXXVII, No. 18, pp. 263-276

146 Gangrene of Sinus Pyriformis in Scarlet Fever. (Ein Scharlachfall mit seltener Komplikation.) T. Hecker.
147 *Functional Amenorrhea. B. Ottow.
148 *Treatment of Traumatic Meningitis. Schneider.
149 *Fasting as Therapeutic Measure. (Fastenkur.) G. Hermann.

147. **Functional Amenorrhea.**—Ottow was consulted by a woman of 34, a v-para, on account of slight bladder disturbances. She had always been healthy but menstruation had always been suspended during the period from May to September. He found this same anomaly in the case of another healthy woman of 44; menstruation normal at all other times had always been suspended between spring and fall. The women during the winter lived a quiet, indoor existence, but with the spring they went into the fields and worked at farm labor until after the harvest. This complete change in their mode of life and their hard work, he thinks, explain the gap in menstruation. Ellis and Bischoff have reported a similar periodical amenorrhea in the women of Greenland and Terra del Fuego.

148. **Traumatic Meningitis.**—Schneider reports the case of a fracture of the base of the skull; the previously healthy man fell from a height of 15 feet on a stone table. Cerebrospinal fluid dripped from his nose from the fifth day on, but under lumbar puncture the fluid was diverted; it contained innumerable polynuclear leukocytes. The relief from the lumbar puncture was followed by rapid recovery. A fissure can still be felt at the seat of the fracture, and the patient for some time heard a grating sound at the back of his head as he chewed.

149. **Fasting in Treatment of Gastro-Intestinal Trouble.**—A man of 51 had had weak digestion for several years but abstention from meat improved the condition materially. Four years later he resumed the eating of meat and symptoms returned, suggesting duodenal ulcer. Before the contemplated operation, the patient was made to fast for eight days then put on a mostly vegetable diet for five days, and then made to fast for five more days. The result was a complete cure of all gastro-intestinal trouble and rapid gain in weight on a meat-free diet which he still keeps up.

Therapeutische Monatshefte, Berlin

October XXVI, No. 10, pp. 697-768

150 *Results of Gastro-Enterostomy for Malignant and Non-Malignant Disease of the Stomach. P. Janssen.
151 *By-Effects of Hormonal. J. Voigt.
152 Advantages of Equal Parts Alcohol and Glycerin for Dressing Wounds. (Die Anwendung von Spiritus-Glyzerin zu feuchten Verbänden als Ersatz der essigsauren Spiritus- und Essigsäure-Tonerde-Therapie.) F. Dörken.
153 *Minor Hints. (Technisch-therapeutische Bemerkungen). Scheuer.
154 Laws on Trademarks. (Zur Reform des Warenzeichengesetzes.) Wickboldt.

150. **Gastro-Enterostomy.**—Janssen reports the favorable results obtained in Witzel's service at Düsseldorf, and he ascribes this to the technic. No button is used and the gastro-enterostomy is always made at the lowest part of the posterior wall of the stomach, drawing up the walls of the afferent loop of jejunum in such a way that reflux of its contents into the duodenum is impossible. Still more important, he states, is the introduction of a rubber tube through the gastro-enterostomy opening into the efferent portion of the loop, where it is held in place with a stitch of catgut. Through the outer end, projecting through the abdominal wall, the patient can be fed from the start without irritation of the suture by the passage of food. The tube is left for ten days and it serves to keep the passage permeable, when, after the fifth day, feeding by the mouth is resumed. Still another advantage of this tube is that the stomach is suspended by it in its normal site, and thus is counteracted any tendency to downward displacement or dilatation.

151. **By-Effects of Hormonal.**—Voigt made an intravenous injection of 20 c.c. hormonal to relieve post-operative sluggishness of the intestines in a much debilitated woman of 42. A hard chill followed in twelve minutes, the pulse becoming imperceptible at first and then running up to 200 while the temperature was soon 40.2 C. (104.36 F.), but it returned to normal the same evening. Flatus passed eight hours after the injection and the bowels moved freely the next morning and up to twenty times a day during the next five days. This diarrhea was a very unfavorable complication in the case, and a considerable drop in the blood pressure seems to be an indispensable feature in the action of hormonal. This must be taken into account in using it in the clinic, so that it should be reserved for the most serious cases.

153. **Minor Hints.**—Scheuer mentions a number of minor points which he urges the general practitioner to bear in mind, such as, that alcohol does not acquire bactericidal power unless it contains 25 per cent. water. Also that wooden spatulas can be bought for 20 cents per thousand, and thus there is no excuse for using the same metal ones for different patients. Also that tincture of iodin with age loses its odor and color and nearly all its antiseptic efficiency. Also that the edges of the mouths of bottles are very seldom kept covered, while the lack of this is liable to infect the contents as they are poured out. Also that oatmeal gruel and rice gruel are more nourishing and better than the expensive infant foods. Also that physicians are too apt to treat symptoms instead of seeking for and removing the cause.

Therapie der Gegenwart, Berlin

October, LIII, No. 10, pp. 433-480

155 *Tubercle Bacilli in the Blood-Stream. (Tuberkelbacillen im strömenden Blute.) F. Klemperer.
156 *Ileus with Pancreas Disease. A. Wolff.
157 *Causes and Treatment of Falling Out of the Hair. (Pityriasis capitis.) E. Kromayer.
158 *Vegetable Days in Treatment of Diabetes, Gout and Obesity. (Gemüsetage.) Disqué.

155. **Tubercle Bacilli in the Blood Stream.**—Klemperer examined the blood of thirty-nine persons, including fourteen with pulmonary tuberculosis, seven suspects, ten with other affections, and eight healthy persons. Acid-fast bacilli were found in small numbers in nearly all the tuberculous patients, while they were only exceptionally found in the others. He thinks that Kurashige's positive findings in all the tuberculous and healthy persons he examined suggest the possibility of some technical error, especially as inoculation of animals gave positive results only in four cases among the twenty healthy persons infected. It is possible also that some of his apparently healthy subjects were already infected; a number are stated to have developed tuberculosis soon afterward. The diagnosis of pulmonary tuberculosis cannot be based alone on the discovery of tubercle bacilli in the blood, as they are found with other localizations of tuberculosis. The bacilli in the blood have about the same diagnostic importance as the Pirquet reaction, although not all the persons giving a positive response to the Pirquet test have tubercle bacilli in the blood. Their presence permits no conclusions as to the prognosis, as they were found in the mildest as well as in the severest cases. The constant and unchecked penetration of tubercle bacilli into the blood stream—which seems to be an established fact—renders the question of the portal of entry of comparatively little importance. It also shows the comparative harmlessness of the tubercle bacilli, and that special local and general conditions are necessary for them to settle and thrive at any point.

156. **Ileus with Pancreas Disease.**—Wolff remarks that too little attention has been hitherto paid to the disturbances in the bowel with disease in the pancreas. These disturbances may be functional or microscopic or chemically demonstrable or they may be merely subjective; ileus is comparatively frequent. In a typical case reported, the threatening ileus was cured by internal measures each time in succession as it returned in the course of four weeks. Between each recurrence there was a stage of comparative health with regular bowel functioning. The patient was a man of 51 who had complained for a year of gastric disturbances and had been treated for suspected gall-stones; gastric cancer was also considered. Then he had an attack of severe abdominal pains, fecal vomiting and no stools, but conditions returned apparently to normal after rinsing out the stomach and intestines and local application of heat. These attacks returned at intervals of a week or two and steatorrhea was observed. Finally, symptoms of peritonitis developed and necropsy showed three patches of gangrene in the mesentery and a cancer in the pancreas. Several elements must have conspired to bring on the recurring ileus but the main factor was arterial thrombosis.

157. **Treatment of Loss of Hair.**—Kromayer emphasizes that the scalp needs light and air to be kept in good order, and that in our modern civilization the hair is doomed to gradual destruction as it has lost its importance as a protection for the body. The sweat and sebum accumulate and afford a good culture medium for germs, and he says that the physician should examine for pityriasis once in a while, just as the dentist examines the teeth. He has devised a little cleansing brush to run between the hairs to do the same service for the scalp that the tooth brush does for the teeth. When pityriasis is installed, he thinks sulphur is about the best remedy.

158. **Vegetable Days in Diabetes, Gout and Obesity.**—Disqué has found restriction to vegetables once or twice a week an admirable means to regulate the diet without keeping the patients under constant restrictions. He has found this useful not only in diabetes and obesity, but also with gout, giving the preference to the purin-free vegetables and fruit and avoiding spinach, peas and beans, as these contain purins. Green vegetables and salads are allowed at will; this amounts to practical starvation without the patient suffering from hunger. He allows as beverage only tea or lemonade with saccharin. In this way the calories can be reduced by a fourth to a half on an average during the week without the patient's missing them.

Wiener klinische Wochenschrift, Vienna

October 3, XXV, No. 40, pp. 1473-1512

159 Localization in Heart of Cause of Disturbances. (Lokalisation im Herzen.) H. E. Hering.
160 *Sodium Taurocholate Fixation of Complement Test in Diagnosis of Meningitis. D. Danielopolu.
161 *Diagnosis of Cardiovascular Disease. (Zur Diagnostik der Krankheiten des Kreislaufes.) J. Tornai.
162 *Epilepsy. (Zur Aetiologie und Therapie der Epilepsie.) C. Tsiminakis.
163 Fever in Late Stages of Syphilis. (Zur Frage des Fiebers in späten Syphilisstadien.) Bjalokur.
164 Typhoid Bacilli in Mouth of Typhoid Patients. B. Purjess and O. Perl.

160. **Diagnosis of Meningitis by Hemolytic Test.**—Danielopolu has worked out a diagnostic test from the capacity pos-

sessed by the cerebrospinal fluid to inhibit in dog-blood the hemolysis induced by sodium taurocholate. This capacity is remarkably increased in case of meningitis, as he found constantly in twenty-seven cases, with thirty-seven normal controls. The test is positive long before cytodiagnosis is possible.

161. **Aids to Diagnosis of Cardiovascular Disease.**—Tornai describes a number of minor points he has learned in the course of long experience with cardiovascular disease. Among them is the importance of suspecting syphilis when a person in the twenties has a systolic murmur in the second right intercostal space, brief and rough. This murmur in these conditions is weaker at the ordinary point for aortic murmur, and there is no hypertrophy of the left heart, inevitable with much aortic stenosis. Discovery of this murmur for which no other cause can be found should always call for the Wassermann test. He has found it useful in differentiating cardiovascular affections to dam the circulation in the limbs by applying a tourniquet to arms and legs. This has marked therapeutic efficacy in some cases, giving great relief, and the symptoms of aortic insufficiency disappear while the blood is thus dammed, returning again as circulation is restored. Only when there is a true defect of the aortic valves will the diastolic murmur persist when the limbs are tied off in this way.

162. **Epilepsy.**—In the eight cases reported the epilepsy seems to have been originally started by reflex action from adenoid vegetations, and their removal put an end to the tendency. The author thinks that a reflex origin is far more common than generally suspected, and that careful search for the source of the reflex would cure in many cases if this can be done before the condition has become so chronic that genuine epilepsy is installed. His patients were children between 10 and 15, except one man of 32. The seizures in the latter case have been much reduced in frequency; the operation is of recent date.

Zeitschrift für Urologie, Berlin

October, VI, No. 10, pp. 807-886

165 Dalempazius, 1790. Discoverer of Böttcher's Sperm Crystals. P. Fürbringer.
166 *Cancer of the Testicle. A. Vecchi.

166. **Cancer of the Testicle.**—Vecchi gives ten pages to tabulation of the details of twenty-four cases of cancer of the testicle. Three of the men were between 26 and 30 and twelve between 30 and 40. The growth first attracted attention by its size in all but three cases; in these a trauma first called attention to the region. The pain and discomfort were relatively slight until the growth had reached a considerable size or had involved the spermatic cord; then came the lancinating pains in the testis radiating to the inguinal and lumbar regions. Operative treatment consisted in merely removing the testis, dividing the spermatic cord high up. Recurrence of the growth was generally in the form of metastasis in the lymph-nodes; it is possible that eradication of the connected nodes might give better results, but he doubts this.

Zentralblatt für Chirurgie, Leipsic

October 5, XXXIX, No. 40, pp. 1361-1400

167 *Intratracheal Insufflation after Tracheotomy. M. Tiegel.
168 Auscultation in Diagnosis of Appendicitis. E. Unger.

167. **Intratracheal Insufflation after Tracheotomy.**—Tiegel thus saved the life of a child tracheotomized for extraction of a large bean in the bronchus. Some injury had been done to the mucosa, and in the night the child was suffocating as the deep air passages had become tightly plugged with phlegm. By intratracheal insufflation according to Meltzer's technic, the bronchial secretion was forced out of the remote bronchi. One mass was several cm. long and compact; it lodged in the cannula and was extracted with forceps. After each insufflation, violent coughing helped to dislodge the plugs. It is of the greatest importance for the practitioner to know, he says, that the method in this case extricated the patient from a condition of grave danger in which all other measures had failed. The secretions were evacuated so completely that no nidus for infection was left, and the child recovered without complications. He thinks that this technic may possibly prove useful in diphtheria of the trachea, to aid in removing low-seated false membranes, as the mechanical conditions here are about the same as in the clinical case reported. No complicated apparatus is required, merely an oxygen tank, rubber tube and catheter of caliber small enough to permit the reflux of the oxygen and air between it and the walls of the air passages.

Zentralblatt für Gynäkologie, Leipsic

October 5, XXXVI, No. 40, pp. 1297-1352

169 Primary Sarcoma in Small Intestine. E. A. Björkenheim.

Zentralblatt für innere Medizin, Leipsic

October 5, XXXIII, No. 40, pp. 989-1012

170 Lepra Bacilli in Vaccine Pustule on Leper. L. Merian.

Gazzetta degli Ospedali e delle Cliniche, Milan

October 1, XXXIII, No. 118, pp. 1233-1240

171 Severe Acute Myocarditis Following Tubsillar Infection. G. Vitello.

October 3, No. 119, pp. 1241-1248

172 Advantages of Determination of Uric Acid in Urine by Ruhemann's "Uricometer." A. Vattuone.

October 6, No. 120, pp. 1249-1264

173 *Jugular Pulse. (Sull'impulso al giugulo.) V. Maragliano.

173. **Pulsation in the Jugular Region.**—Maragliano's experience has been that pulsation may sometimes be felt in the jugular vein in persons with sound aortas while it may be lacking in those with marked dilatation of the aorta or even with an aneurysm. In twenty-four persons examined, roentgenoscopy failed to reveal anything wrong in the aorta except in five; in these the aorta was seen to be materially dilated but there was an actual aneurysm in only one of these patients. The pulsation in the jugular region was marked in ten of the twenty-four who were apparently entirely free from arteriosclerosis, syphilis and dilatation of the heart. On the other hand, two persons with aneurysms had no pulsation in the jugular region, their only symptoms being a retrosternal area of dulness and slight subjective disturbance. In other the aneurysm caused absolutely no subjective trouble The retrosternal area of dulness, pulsation in the jugular region and roentgenoscopy are most instructive when combined The jugular pulse may be observed when the aorta is a little nearer the sternum than usual or the heart beat is exceptionally strong.

Policlinico, Rome

October 6, XIX, No. 41, pp. 1481-1516

174 *Helminths Complicating Operations on Children. (Le complicazioni da ascaridi nella chirurgia infantile.) V. Brun.
175 *Intoxication from Male Fern. (Avvelenamento da estratto etereo di felce maschio.) G. De Poloni.

174. **Helminths Complicating Operations on Children.**—Brun remarks that the articles on this subject in the literature dwell mainly on the mechanical aspect; the general toxic action liable with helminths does not seem to have been studied much. He says that when the preliminary purge before an operation brings ascarides, it is better to postpone the operation until after a systematic course to get rid of the helminths. He removed a sarcoma of the small intestine from a boy of 8 last year and ascarides tore open the suture, with ensuing fatal peritonitis. He cites four similar cases from the literature in which enterotomy had been done for ileus from worms. Railliet recently devoted his inaugural thesis to the subject of helminths in the pathology of children, and reports six cases in which ascarides were found in the pus of an encapsulated peritonitic process or in fistulas. The greatest danger is from the chronic intoxication for which the helminths are directly or indirectly responsible; when the intoxication from the anesthetic is superposed on this there is liable to be serious trouble. This occurred in eight of Brun's cases, with four deaths. The children were apparently healthy and the operation was for hernia, dislocation or adenoid vegetations. In three similar cases the helminthiasis much aggravated ordinary chloroform intoxication. He thinks that it would be a good plan to examine the stools of every child before an operation, but as this is impracticable, he gives santonin with a purge as a routine measure to every child

entering the surgical ward, examining the stools afterward. Dufresne reported 5,000 ascarides passed by one child in the course of three years, 600 coming away in one day; Zotoff found 500 in the bowel of a child dying from peritonitis following obstruction by ascarides; Baginsky found 800 in the stool of a child with supposed appendicitis; Del Lago counted 450 evacuated in ten days, a number by the mouth, and Brun found 122 in a child of 26 months who had died from ascarides toxemia, and 184 in another 5 years old. A number of surgeons have reported cases of suffocation of children by ascarides in the air passages. Magrassi has recently published two cases of the kind the second day after an operation, and Railliet has compiled twenty-five cases independently of chloroform. Brun found an ascaris in the appendix in three cases during a herniotomy.

175. **Intoxication from Male Fern.**—The drug had been given in a dose of 7.2 gm. in twelve capsules, followed by calomel. The chief symptoms of intoxication following the expulsion of the tenia were vomiting, diarrhea, tendency to collapse and cramps and bulbar symptoms on the part of the respiration and heart, the pulse growing very slow and respiration only 14 or 15—actual paralysis, yielding only to caffein, mustard externally and rubbing. These attacks occurred from the fifth to the eight day after taking the drug, when the vomiting and diarrhea had subsided. The patient was a woman of 28.

Riforma Medica, Naples

September 28, XXVIII, No. 39, pp. 1065-1092

176 Blood Findings in Pulmonary Tuberculosis. (Reperti ematologici nella tubercolosi polmonare.) P. Masenti and M. Borgogno.

Brazil-Medico, Rio de Janeiro

September 15, XXVI, No. 35, pp. 361-372

177 Moving Pictures of the Gait in Athetosis. (Nota sobre a marcha na athetose.) A. de Castro.

Medicina Contemporanea, Lisbon

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178 Obesity and Genital Dystrophy Probably of Hypophysis Origin. B. Moraes.

179 Prophylaxis of Lead Poisoning from Food. (Portas que se abrem ao saturnismo alimentar.) G. Ennes.

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180 Typhus in Portugal. (Existe a doença de Brill em Portugal?) A. de Azevedo.

181 Discovery of Surgical Anesthesia. (O Dr. W. Morton e a descoberta da anesthesia cirurgica.) R. dos Santos and A. Mac-Bride.

Semana Medica, Buenos Aires

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182 Animal Chlorophyl. (Analogias entre animales y vegetales.) V. Delfino.

183 Measurement of the Will Power. (Medicion practica de la potencia volitiva. Es posible?) V. M. Farré. Commenced in No. 36.

Hygiea, Stockholm

August, LXXIV, No. 8, pp. 849-944

184 *Spontaneous Subarachnoid Hemorrhage. L. Ehrenberg.

185 Toxicity of Organic Preparations of Arsenic. (Några ord om de organiska arsenikpreparatens, särskildt salvarsanets, toxicitet.) C. G. Santesson.

186 By-Effects of Salvarsan. K. Heden.

187 Trachoma in Palestine. (Om trachomets förekomst i Betlehem och erfarenheter om dess behandling, särskildt om den operativa behandlingen af trachomatös trichiasis.) G. I. Ribbing.

188 *Laryngeal Tuberculosis. (Studier öfver struptuberkuloser med särskild hänsyn til dess kirurgiska behandling.) N. Arnoldson.

184. **Spontaneous Subarachnoid Hemorrhage.**—Ehrenberg reports the case of a man of 46 who suddenly developed symptoms of severe acute meningitis with predominant localization at the base of the brain, coming on in the midst of apparent health, except for a chronic catarrhal trouble and a history of mild syphilis two years before. Lumbar puncture, however, explained the trouble as due to subarachnoid hemorrhage, and complete recovery gradually followed as the blood was absorbed. There was nothing at any time to suggest injury of the brain, the symptoms all pointing to meningitis. No cause for the hemorrhage could be detected, nothing to suggest nephritis, hemophilia or arteriosclerosis, and the blood-pressure was not high. There have been no further symptoms since and the man was soon able to resume his work as a bookkeeper. In a second case a woman of 57 developed much the same picture, only with recurring coma and death the second day. Ehrenberg has found twenty-two cases on record in the last ten years with certain spontaneous subarachnoid hemorrhage and seven other cases in which this diagnosis was probable. In all, the clinical picture deceptively simulated extremely acute meningitis only that the onset was more sudden and that the symptoms gradually retrogressed. Two clinicians have reported recurrence of the syndrome. Necropsy in fifteen of the cases showed the hemorrhage of greater or less extent. In five cases the blood was restricted to the base of the brain, promptly fatal in three. Spread of the blood to the convexity of the brain obscures the clinical picture by bringing on coma. In only three of the cases was the source of the hemorrhage discovered in a ruptured artery. In others the findings were merely diffuse congestion of the pia. Two of the patients who recovered were under 20 as also three who died, but 61 per cent. of all the patients were over 40. Admixture of fresh blood with the spinal fluid by injury during the puncture is readily detected by the fact that the blood coagulates. Coma is a bad sign. Repeated lumbar puncture is recommended in treatment but the patient should be reclining. Sergent reported a fatality after lumbar puncture, the patient seated, the procedure causing rupture of an aneurysm in the posterior cranial fossa.

188. **Laryngeal Tuberculosis.**—Arnoldson's monograph fills 240 pages and is accompanied by several plates. He gives the details of sixty-three out of a total of about 600 cases of laryngeal tuberculosis, and discusses the subject from various standpoints. Tuberculosis of the throat is almost invariably secondary, and local medicinal measures have no essential influence on the course of the disease. Treatment to be effectual, he says, must include general hygiene and dietetic measures with a rational active local treatment done by specialists in this line. A spontaneous cure is possible, but so rare that it should never be counted on. Endolaryngeal excision, including amputation of the epiglottis, is liable to induce great functional improvement; it must always be combined with other local measures, cauterization and possibly the two-route Pfannenstill method of giving potassium iodid internally and applying hydrogen dioxid or ozone locally to generate oxygen in the diseased tissues. He discusses further the extralaryngeal methods of treatment in the exceptional cases not amenable to endolaryngeal measures. In one of this kind, the patient improved under endolaryngeal measures but finally required removal of the entire larynx. The operation was comparatively easy and seemed to be successful at first but neglect to drain the incision in the skin entailed complications which proved fatal. Arnoldson urges the installation of a special central station in the city where a tuberculosis specialist and a laryngologist could work together and where all those suffering with laryngeal tuberculosis should be sent for treatment. The results to date of the present methods of treating laryngeal tuberculosis leave much to be desired—too often a curable affection is left to drift into an incurable form from the lack of effective measures in time.

Ugeskrift for Læger, Copenhagen

September 26, LXXIV, No. 39, pp. 1365-1404

190 *Acute Hemorrhagic Nephritis in Course of Pulmonary Tuberculosis. F. Tobiesen.

191 Modified Technic for Wassermann Reaction. (Herman-Perutz' Reaktion.) B. Pontoppidan.

October 3, No. 40, pp. 1405-1432

192 Connective-Tissue Test of Stomach Functioning. (Undersøgelser over Schmidts Bindevævsprøve.) J. P. Gregersen.

190. **Acute Hemorrhagic Nephritis in Pulmonary Tuberculosis.**—Tobiesen has encountered twenty-one cases of acute hemorrhagic nephritis developing in the course of pulmonary tuberculosis as he relates in detail. In ten cases the diagnosis was confirmed by necropsy, in twelve cases the nephritis developed while the patients were in the hospital and the advanced pulmonary lesions amply explained the kidney disease in all but two cases in which the lung process was in the first stage. He reviews the literature on the subject. This secondary nephritis is generally a casual discovery on examination of the urine. The symptoms gradually subsided in most of the cases; in three amyloid degeneration followed, and in one the acute nephritis attacked kidneys already the seat of amyloid changes.